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*Dr. Drake,  
Louisville Ky.*

# THE EPIDEMIC OF 1847:

OR,

## BRIEF ACCOUNTS OF THE YELLOW FEVER,

THAT PREVAILED AT

New-Orleans, Vicksburg, Rodney, Natchez, Houston and Covington,

COLLECTED AND PUBLISHED

BY

E. D. FENNER, M. D.

(Taken from No. 2, Vol. 5, of the New-Orleans Medical and Surgical Journal  
for September, 1848.)

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Dr Daniel Drake,  
With the Respects  
of  
The Author.

New Orleans, October 17<sup>th</sup>, 1848.

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## PREFATORY REMARKS.

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As stated in the title page, the following pamphlet is taken from the 2d number, vol. 5, of the New Orleans Medical and Surgical Journal, (September, 1848.) It is not intended for a *treatise on Yellow Fever*, but merely an imperfect history of a single Epidemic. I had a few extra copies struck off for private distribution, and will take this occasion to add some information in relation to the generous beneficence of our Municipal Councils and the different benevolent societies of New Orleans, which the hurry of the moment and frequent interruptions did not allow me to enclose in the body of the paper.

If I am not mistaken, the liberality of this city and its numerous benevolent societies towards that large class of indigent and ignorant people to be found in every large city, entitles it to a conspicuous position on the scores of *Charity* and *Benevolence*. I would not *boast* of our good deeds done to the *poor and afflicted*, for "*charity vaunteth not*;" but I may be permitted to offer some evidence to those who live abroad and *know us not*, that our city, with all its faults, *has some redeeming virtues*. It is thought abroad that we live *too high* and *too fast*; that we make a *mere frolic* of life, with all its ills and cares; but who that *knows us* will deny that we *work hard*, that our hearts are ever awake to generous sympathies, and that our impetuous feelings are strongly tempered with the milk of human kindness?

After the epidemic was declared by the Board of Health, the councils of the different Municipalities adopted liberal measures for the relief of the poor. They appointed two physicians and one apothecary for each ward, who, with cuppers and bleeders, were to supply all the necessary wants of the sick.

The various benevolent societies at once took active measures for the relief the afflicted, and sought them assiduously throughout the city.

On application to our worthy Mayor, the Hon. A. D. Crossman, and to the officers of the most prominent benevolent societies, I obtained the following memoranda, which, although not exactly correct, will serve to give some idea of the benevolence and munificence of our citizens.

The following amounts were expended for charitable purposes during the epidemic of 1847, viz:

By the city of New Orleans, upwards of	\$19,000
“ Howard Association	5,919
“ Independent Order of Odd Fellows, about	5,000
“ St. Thomas Street Infirmary for widows and orphans	3,000
“ Bartholemew Street Infirmary for immigrants	4,000
“ Esplanade Street do do	3,000
“ Benevolent German Association	4,500
“ Hebrew Benevolent Association	1,500
“ Firemens' Charitable do.	2,000
<b>TOTAL</b>	<b>\$47,919</b>

It is supposed that there were at least *five thousand dollars* more expended for charitable purposes than is here specified.

The following note from the Secretary of the Howard Association, is worthy of being inserted entire :

“ During the epidemic of 1847 the Howard Association had under their charge and attention *eleven hundred and fifty-four cases*, of which *one hundred and twenty-two* died, and *one thousand and thirty-two* were discharged cured. They expended during the prevalence of the epidemic *fifty-nine hundred and nineteen dollars and fifty-eight cents*.

Many cases presented themselves to members during the epidemic, whose situation did not warrant their being taken charge of by the association, yet who required more or less pecuniary aid and attention, and who were taken care of and provided for by *individual members*. Of course these are not included in the above statement.

Very truly, your obedient servant,

G. W. SHAW,

To E. D. FENNER, M. D.

Secretary Howard Association.

I should not omit to mention in this connection that there were 2311 patients admitted for yellow fever into the New Orleans Charity Hospital. Nor should I omit to mention, in justice to the medical profession of this city, that *12,368 patients were admitted into this institution and treated gratuitously during the year 1847*. The able house surgeon, whose whole time and attention are occupied in the discharge of his onerous duties, is the only medical man that receives any compensation for the vast amount of professional service rendered at this large hospital.

If the facts here stated reflect no credit upon the generous citizens of New Orleans, then is *benevolence a vain illusion*, and *sordid selfishness* the only feeling really worth cherishing. New Orleans is a very remarkable place in many respects, but perhaps there is nothing for which it more justly deserves to be distinguished than its active and untiring benevolence. When the stranger visits our city during the winter season, he cannot fail to be struck with the extraordinary display of industry and energy in business everywhere to be seen. If he would come again during the prevalence of an epidemic, when sickness and sorrow and death shed a gloom on all around, he could not fail to be struck with the contrast, yet he would discover something of the same indefatigable energy in the performance of the melancholy duties of humanity. The poor sufferer, without money, or friends or acquaintances, remains desolate no longer than his cries for help can be heard. As soon as his affliction is ascertained, men and women whom he never

saw before, and upon whose kindness he has no other claim but that of simple *humanity*, seek him out wherever he may be, and supply him with food and medical aid: they also have him nursed day and night, until he either dies, or is set upon his feet again and prepared to resume the duties of life. How many victims have thus been snatched from the jaws of death—how much pain, destitution and anguish have thus been relieved is known to but few besides HIM who imbued our hearts with more or less of benevolence and charity, and enabled us to enjoy “*the luxury of doing good*.” It often happens that these kind offices are bestowed upon beings so degraded as to be incapable of gratitude; but this does not stay the hand of charity or stifle the voice of consolation.

I have concluded to republish, in this place, the following editorial remarks on the yellow fever of 1847, which appeared in No. 4, vol. 4, of the New Orleans Medical and Surgical Journal. More mature reflection has not caused me to alter any conclusion there expressed, as will be seen by the subsequent history of the epidemic.

#### “YELLOW FEVER.

“The late Epidemic was probably the most extensive that ever prevailed in this city. As to its severity and mortality there may be difference of opinion. It is impossible to make a correct computation of the whole number of cases. Some have estimated it as high as *twenty* or *twenty-five thousand*, but we are inclined to think either of these calculations above the truth. As to the mortality, the reports from the cemeteries, as well as they could be obtained by the Board of Health, only make out something upwards of 2,300 from yellow fever; but this is again thought by many to be far short of the reality. It is much to be regretted that we cannot obtain greater precision in such important details. The fever raged as an epidemic about two months, and the greatest mortality from it was in September, when the number of deaths reported to the Board of Health, amounted to 1,044. During the prevalence of yellow fever in this city, the most frightful and exaggerated reports circulated abroad, but this is nothing unusual. A careful collection of all the important facts connected with the rise, progress and decline of the late epidemic, would form an exceedingly interesting memoir, and we have it in contemplation to undertake the task, but it must necessarily require a good deal of time and labor. On the other hand, it would seem to be almost useless to write anything more on the subject of yellow fever. We really believe that the archives of the profession already contain every thing that need be said on the subject; and yet the world is but little wiser in regard to it than it was half a century ago. Every debateable question which was then discussed, in relation to its *cause, nature, propagation* and *treatment*, still remains undecided; and, with the exception of a single point (*black vomit*), there seems to be as great a diversity of opinion at this moment, as at any previous period. We believe the physicians of New Orleans and Mobile have completely settled the point, that *black vomit is a hemorrhage from the stomach*; but, doubtless, there are some who do not even admit this. Medical are very much like religious controversies: in either case, when men have formed and *expressed* opinions, they seem to shut



their eyes against all farther light, and hold on to them with like pertinacity. Then why write any thing more upon a subject that has been so fully and so ably discussed as yellow fever? It would certainly be vain to do so *with a view to enlighten or change any who have formed and expressed opinions*. But is it not our duty to transmit our observations to those who are to come after us? There is scarcely *any point* on which *some of us* are not probably right, and many wrong. With *our* assistance, our successors may fortunately discover the truth on all points; but if *they* have to begin their investigations *de novo*, the same controversies must continue to arise and be endless. They are certainly entitled to the benefit of our observations; and some masterly mind, yet unborn, may analyse them thoroughly, winnow the grain from the chaff, and establish the truth by facts and logic.

We have ourselves seen yellow fever on *five different years*, to some extent in all its phases, and have used our best endeavors to study it with an unbiassed mind. We have finally been brought to conclusions *by no means novel*, yet at variance with many possessing far more ability, and who have had a much larger experience. When we proclaim our convictions (if we ever venture to do so), we shall be acquitted of the charge of *presumption*, if it appear they only corroborate some of the ablest authorities in the profession.

We will here simply state a few facts relating to the late epidemic, which we think can be fully substantiated.

1. In the spring of the year, intermittent fever prevailed to a great extent.

2. As the season advanced, frequent cases of mild remittent fever were to be seen among the intermittents.

3. Soon after the first of July, severe remittents became common; some of them terminating in hemorrhages and black vomit. *Yellow Fever* was now announced.

4. The yellow fever raged in Vera Cruz in May and June; the intercourse between this city and that, at the time, was very great; hundreds of discharged soldiers were returning from Vera Cruz to this place, some of them convalescents from yellow fever, but *hardly any labouring under it*.

5. On the 22d of June a man, recently from Vera Cruz, died of *black vomit* at a hotel in Lafayette. He occupied a large room with some ten or fifteen other persons. None of these are known to have been sick soon afterwards.

6. The next death from black vomit in Lafayette, occurred about the 18th July; four or five squares distant from the first.

7. The first death from black vomit in New Orleans, occurred in an Irishman in the rear of the city, near the Charity Hospital. This occurred about the 1st of July.

8. The first death from the same that occurred at the Charity Hospital, was on the 6th of July.

9. The next ten deaths at the same hospital were from different parts of the city, showing no other connection between each other, except that a man and his wife were sick in the same house.

10. August came—deaths with black vomit were frequent, and yellow fever was pronounced *Epidemic*.

11. At this time all the forms of summer fevers might be seen: *In-*

*termittents, mild remittents, severe remittents, congestive and yellow.* Remittent-bilious and yellow fever were predominant.

12. All the milder attacks of intermittent and remittent fever, if neglected or maltreated, assumed the appearance of what is called *yellow fever*—especially if they terminated *fatally*.

13. On the other hand, plain cases of yellow fever, if not promptly cured, sometimes tapered off into intermittant fever, and then recovered. We saw one instance of this.

14. In the early stage of mild attacks of fever, no one would pronounce a *definite diagnosis*: if promptly relieved, it was *not yellow fever*: if it terminated *fatally*, all doubt was removed.

15. At this very time there were cases of what is called *congestive fever*, which terminated fatally in the first or second chill.

16. September came—and the epidemic raged with its greatest violence, affecting to a greater or less extent *all ages, sexes, castes and conditions, natives and foreigners*. Yet *all* were not sick: many escaped who had never had the fever, and some who had never spent a summer here before.

17. Many *creoles or natives* had it, both white and colored, though the disease was evidently milder with these and with unacclimated negroes.

18. A number of persons had the fever for the second and third time, and some had it who had escaped several previous epidemics. One of the worst cases we saw was an intelligent Irishman, who said he had nearly died of it in 1825, and had lived here ever since, excepting 17 months spent in Mobile. He recovered, after having hemorrhage from the mouth and turning very yellow.

19. Recent settlers in the city, especially the poorer class, evidently suffered the most, above all, those who were much exposed to the sun.

20. The fever prevailed throughout the entire limits of the city and Lafayette, which lies on the river, immediately above; and to the greatest extent, wherever were to be found the greatest number of poor and unacclimated people. The extent and violence of the disease seemed to be governed more by the last mentioned fact, than by any thing else pertaining to the different localities.

21. Many persons who left the city late in the summer, were attacked on their journey; and some who came in late were attacked within a very short time after their arrival, especially if much exposed to the sun.

22. October came—and, on its approach, what is called *yellow fever* most rapidly declined; the monthly number of deaths having fallen from 1044 down to 198. The comparative number of intermittents now began to increase again, and when, *neglected or maltreated*, many of them ran into *yellow fever*: if promptly relieved, of course they were but *simple intermittents*.

23. During the month of October the weather was mild, fair and beautiful, hardly approaching *within 20 degrees of frost*.

24. November came—and with it our travelling citizens, together with the vast number of persons who annually come to New Orleans to do business in the winter season. The papers had announced that the epidemic had disappeared, and every body returned to their homes and avocations. But yellow fever was not yet extinct; sporadic cases were to be seen in different parts of the city. The deaths from it re-

ported for this month were 12. The weather continued so warm for the first half of the month as to render fires almost useless. The city was so rapidly filled as to give rise to some apprehension that the epidemic would be renewed; but such was not the case. It had run its career and was gradually dying away.

25. During this month European emigrants commenced pouring into our city, bringing with them their fatal companion *typhoid or ship fever*. It was most curious to observe with what facility the subjects of this fever assumed the characteristic symptoms of yellow fever after entering the Mississippi river. Some who had escaped sickness during the long voyage by sea, were attacked soon after entering the city, and, going into hospital, in seven or eight days presented hemorrhage from the gums and yellowness of the skin. One or two cases terminated fatally with black vomit. Through the politeness of Dr. Ker, we were shown several of these cases at the Marine Hospital.

26. On the 25th of November the weather suddenly turned very cold, and on the 26th and 27th there was ice in the gutters. On the 28th, white frost.

27. The last death from yellow fever was reported in the weekly report of the Board of Health for the 25th December. There were ten deaths from yellow fever in this month.

28. Yellow fever prevailed this year at the following places, viz: Mobile, Galveston, Alexandria, (on Red river) Vicksburg and Rodney, on the Mississippi river; all having constant communication with New Orleans. There were also some cases at Baton Rouge and Plaquemine; whereas Natchez, Grand Gulf, and, we believe, St. Francisville escaped.

29 Quarantine was maintained in Natchez and Vicksburg. The former escaped and the latter had the fever.\* Whereas, of the intermediate towns between those places, Rodney, next to Natchez, was severely scourged, whilst Grand Gulf, next to Vicksburg, escaped. We have addressed a *circular* to physicians residing in each of these places, and hope to obtain from them some interesting intelligence relative to the matter.

Such are some of the prominent facts concerning the late epidemic, which, we think, can be fully substantiated by good evidence. There are many others of great importance, which a minute history of it would display in their proper light. The whole would give rise to deductions which would probably vary according to the diversity of intellect by which they were examined."

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\* I mean that Natchez escaped an *epidemic*; not *entirely*, as was supposed by Dr. C. H. Stone and Dr. W. P. Hort.

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## THE EPIDEMIC OF 1847 :

*Or Brief Accounts of the Yellow Fever that prevailed at New Orleans, Vicksburg, Rodney, Natchez, Houston, (Texas,) and Covington, Louisiana. Collected and published by E. D. FENNER, M. D., of New Orleans.*

Under this title I shall lay before the Profession such observations as I could hastily throw together, in addition to those I gave under the head of "*Health of the City*" in the last volume of this Journal, together with those obligingly furnished me by Drs. B. J. Hicks, of Vicksburg, W. G. Williams, of Rodney, W. McCraven, of Houston, S. A. Cartwright of Natchez, and J. Gilpin, of Covington, La.

Wishing to obtain as full an account as possible of the late epidemic in the lower part of the Mississippi Valley, I took the liberty of addressing the above named gentlemen (as well as several others who did not reply) who gave me the papers that follow. They will please accept my grateful acknowledgements for their kind attention to my request, and I doubt not, their favours will be duly appreciated by the Profession at large. To all of them, except Dr. Gilpin, I addressed a set of interrogatories which I thought would cover the grounds of inquiry. Dr. Gilpin's letter was published in the November number of this Journal, but I deem it proper to republish it in this connection, by way of completing the history of the epidemic.

Dr. Lewis, of Mobile, did me the favour to send over a hasty sketch, when I expected to publish in March last, but afterwards concluded to draw up a more elaborate report of the fever at Mobile, which may be found in the last number of this Journal.

Dr. Ashbel Smith, of Galveston, Texas, also promised me a communication, but afterwards determined to report more fully in a different way, which I hope will soon see the light. We shall thus, amongst us all, I trust, make up a pretty good history of the epidemic as it appeared at different places, which is the sole object I have had in view.

### I.—*The Yellow Fever of New Orleans.*

I sincerely wish that some abler hand had undertaken that portion of the task which relates to New Orleans, and I have postponed writing, partly under the hope that it would be, but seeing no prospect of it, I have determined to come forward and again throw myself on the indulgence of the Profession, as it would be a reproach to us all for such an epidemic as that of 1847 to pass without farther notice than the brief editorials of a periodical. I shall, therefore, endeavour to somewhat enlarge the historical account, though I must necessarily be brief at this late day. This publication should have been made in the March number of this Journal; but, after laying aside my editorial labors, I really felt so much jaded in mind that I could not summon sufficient energy to undertake the task. The historical sketch of the epidemic in this city which I am now about to make, must necessarily be very imperfect—in fact, confined pretty much to my own observations, as I have not been able to obtain as much information as I should desire from the physicians of the city, nor has anything on the subject emanated from either of our Medical societies. I shall take up the most salient points as they occur to my mind. In the numbers of this Journal for September, November and January last, under the head of "*Health of the*

City," may be found some editorial remarks on the epidemic, relative to its beginning, progress, extent, mortality, &c., to which I would refer the reader.

*Meteorology of the year.*—I have compiled from the bi-monthly meteorological reports furnished to this Journal by Mr. D. T. Lillie, the following abstract, which will give a good general idea of the weather throughout the year :

*January and February.*—Weather cold, wet and changeable.

Thermometer ranged from . . .	77.5, to 30.°
Barometer " " . . .	30.55, to 29.72.
Number of rainy days . . .	16.
Quantity of rain (inches) . . .	17.960.

*March and April.*—Weather very variable and bad—spring unusually late.

Thermometer ranged from . . .	88.3, to 40
Barometer " " . . .	30.50, to 29.72.
Number of rainy days . . .	13.
Quantity of rain . . .	14.341.

! *May and June.*—Weather variable—May cool, June hot.

Thermometer ranged from . . .	90.5, to 63.5.
Barometer " " . . .	30.26, to 30.
Number of rainy days . . .	21.
Quantity of rain . . .	13.176.

*July and August.*—Rather cool, very wet, much thunder and lightning.

Thermometer ranged from . . .	91.5, to 71.
Barometer " " . . .	30.24, to 29.87.
Number of rainy days . . .	30.
Quantity of rain . . .	22.265.

*September and October.*—Weather fair and beautiful.

Thermometer ranged from . . .	89.5, to 52.
Barometer " " . . .	30.38, to 29.91.
Number of rainy days . . .	17.
Quantity of rain . . .	10.435.

*November and December.*—Weather very changeable.

Thermometer ranged from . . .	83, to 29.
Barometer " " . . .	30.50, to 29.88.
Number of rainy days . . .	12.
Quantity of rain . . .	19.625.

Whole number of rainy days during the year, 108.

Whole quantity of rain,  $97\frac{3}{4}$  inches.

It will thus be seen that the weather throughout the year was for the most part cool, changeable and remarkably wet. The quantity of rain that fell is quite extraordinary. The wettest month was July, during which it rained 22 days. In June it rained 17 days—in August, 8 days.

*Intercourse with Vera Cruz.*—In the month of March, the city of Vera Cruz, (considered to be the favorite abode of yellow fever,) was taken by our invading army under the command of Gen. Scott, and from that time the intercourse between this city and that has been constant and most extensive. As the main body of our army proceeded from Vera Cruz on towards the city of Mexico, everything in the way of men, arms, ammunition and provisions had necessarily to pass through the former place. Throughout the year, new regiments continued to go to this line of operations, and the discharged, the sick and disabled were constantly returning to this place. From the best information I could procure, Vera Cruz has never been entirely free from yellow fever since it fell into our hands ; yet, notwithstanding the large num-

ber of sick and discharged soldiers that returned from that place to this, during the spring and summer of 1847, very few cases of that disease were brought over, and the most careful inquiry I could make has not brought to light a single instance in which it was communicated directly to any person in this city or Lafayette. The nearest approach to it occurred in the following cases, the notes of which were given to me by Dr. Carpenter.

*Case 1st.*—J. Strider, from Vera Cruz, attached to the Quartermaster's service—came from Vera Cruz on the steamer "Galveston," about the 17th June, and landed at Lafayette—had all the characteristics of yellow fever, and died with *black vomit* on the 22d of June. Dr. C. got this note from Dr. Thorpe, who attended the man. I have not been able to see Dr. Thorpe, since the occurrence, but ascertained from Dr. Sunderland, who practises in Lafayette, that the man had laid sick in a large public room at a hotel in which a number of persons slept—that on inquiry, he never heard of any of them contracting the fever—in fact that the next case of yellow fever that occurred in Lafayette, happened in a person who lived four squares from this hotel, and nearly a month after Strider died. About the 25th of July the epidemic broke out in Lafayette and raged severely.

*Case 2d.*—Theodore Bell, musician to the 5th infantry, entered the *Maison de Santé*, June 17th. Had just arrived from Vera Cruz, on the steamer "Massachusetts"—had been in the hospital at Vera Cruz, in bad health—was attacked with fever on the voyage—had fever when he entered hospital here, with yellowness of the skin and eyes &c. On the 2d day after admission had hemorrhage from gums and fauces—became very yellow—vomited a dark colored matter—urine dark—died on the 27th of June.

I saw this case, together with several other physicians, none of whom seemed satisfied that it was a *decided case of Yellow Fever*. The truth is, the man had long been sick with diarrhœa, which I have before seen terminate fatally with hemorrhage and jaundice. I never heard of any sort of connection between this case and the next of yellow fever admitted into this hospital, which occurred on the 20th July.

Although yellow fever was prevailing at Vera Cruz at this time to a moderate extent, there were really hardly any cases brought to this city among the returning soldiers. Their chief disease was chronic diarrhœa. In the number of this Journal for July 1847, was published a letter from assistant surgeon Charles McCormick, medical director, stationed at this place, from which is taken the following extract relating to the sickness amongst the returning soldiers and at Vera Cruz.

*"New Orleans, July 22, 1847.*

GENTLEMEN :—At your request I furnish the following information in relation to the sick and wounded of the army: On the 16th instant the steamship Massachusetts arrived from Vera Cruz, having on board 163 sick from the army. On the 21st the steamer James L. Day arrived, having on board 120 sick men, also from the army and Vera Cruz. The military hospital at the barracks being nearly full, as many of the

men were received there, as Surgeon R. C. Wood deemed it proper to take in, with a view to their proper comfort and accommodation. The balance were placed in Dr. Luzenberg's and Stone, Kennedy & Carpenter's Hospital; and after these two hospitals had been filled, about thirty-nine were sent to the Charity Hospital, where they were received and made as comfortable as possible. In relation to yellow fever in Vera Cruz, Dr. Laub, of the U. S. Army, writes me: "We have a great many sick, and our list increasing; among them some cases of yellow fever, though as yet it cannot be said to have become epidemic. No doubt, however, in a short time we shall have it in all its virulence, at least if the accounts given of it by many here are to be depended on."

"Dr. Barton, U. S. Army, says:" 'Vomito increasing—but exactly what we are accustomed to in New Orleans—its type in some instances severe.'

"Dr. Barnes, who was employed and went from this city to Vera Cruz to assist in the military hospital, says:" 'The yellow fever prevails to a considerable extent in Dr. Porter's Hospital. There are about 350 in it and in Dr. Laub's, of the 1st infantry, and some 82 quarter-master's men. (Of course, the Doctor means, of all cases. F.) But it has not the malignancy I was led to expect it would present here. The most of the cases I have seen present more the appearance of remittent than of yellow fever; and were it not for the brilliant and red appearance of the eye, and above all, the termination of the cases in black vomit, it would be thought, in the country, remittent fever. They either run their course with great rapidity, or improve. I have seen but few cases of the typhoid fever which was seen last summer in nearly all of the patients suffering from it in the N. O. Charity Hospital, and in which it was almost universally fatal. The fever is very high for the first 24 or 36 hours; remission then takes place, of variable degree and duration, and mounts up again, and again remits, until the 5th or 8th day, when the patient either throws up black vomit or is left in a state of great exhaustion, free from fever and convalesces slowly &c.

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\* \* \* "Dr. Dashiell states a case of yellow fever that occurred previous to his departure from Vera Cruz, of a man in good health who was getting shaved in a barber's shop, and who commenced at once to throw up the *black vomit*, expiring (as a matter of course) shortly afterwards. This comprises the latest medical information I have received from that portion of the army in the direction of Vera Cruz.

Very Respectfully,

CHARLES McCORMICK,

Ass't. Surg. U. S. Army."

About the 1st of July an arrangement was effected by which all sick soldiers were taken to Dr. Luzenberg's private hospital, situated on the Pontchartrain railroad, about  $2\frac{1}{2}$  miles from the centre of the city. At this beautiful and commodious establishment they enjoyed every comfort and attention that could be desired. There was probably an average of 500 sick soldiers at this hospital from July to December. As before stated, amongst the large number of disabled soldiers returned



from Mexico, there were *very few cases of yellow fever*. Dr. Luzenberg's hospital consists of three extensive buildings on the same lot, but a little removed from each other. The grounds are spacious and ornamented with flourishing and beautiful shrubbery. The establishment is in the suburbs, and quite retired from the populous part of the city. During the prevalence of epidemics a considerable number of yellow fever patients are generally received into this institution, and this year they were confined to one of the buildings, (the centre.) At this hospital the sick and wounded soldiers were entertained during this sickly summer and autumn, *without communicating or receiving yellow fever*, so far as I have been able to ascertain. How could this have happened, if the disease were either contagious or infectious? These soldiers were mostly from the interior of the country—probably not one in a hundred of them had ever suffered or seen yellow fever.

The vessels at this time plying between this city and Vera Cruz were chiefly engaged in the transportation of men, horses and provisions, and their place of landing was Lafayette; yet the epidemic was not declared there as soon as it was in this city.\*

So much for the effect of our intercourse with the pestiferous city of Vera Cruz. From the time that city succumbed to our victorious arms, predictions were rife that a severe epidemic would follow as a natural consequence. I am aware that the impression has gone abroad that our sickness last year was mainly attributable to this source; but, from the best information I have been able to obtain in relation to it, I am compelled to think such a conclusion *altogether unwarrantable*.

*Sanatory condition of the City.*—The city was, perhaps, never in a more filthy condition than it was throughout this year. Notwithstanding the admonitions of the Board of Health and the remarks on the condition of the streets offered by the editors of this Journal and the newspaper press, from time to time, our city authorities took no precautions against sickness. Even the customary *very imperfect* measures for cleaning the streets were more neglected than usual. New Orleans is notoriously a dirty place, but in 1847 it may be said to have luxuriated in filth. In the month of April, the river rose very high, and for a week or two, poured through the cross streets into the swamp in the rear of the city. At the highest stage of water, a *crevasse* occurred opposite the city, in the little town of Algiers. A vast quantity of water escaped in that direction, before the *crevasse* was repaired. After this, stagnant water remained upon the Bingham race-track until it disappeared by evaporation. Nothing more need be said about the hygienic condition of the city, as it was about as bad as it could be.

*Commencement of the Epidemic.*—We had the customary diseases up to the month of June, such as intermittent, remittent and typhoid fevers, diarrhœa, dysentery, and besides, an extraordinary amount of typhus or *ship fever*. This latter disease prevailed chiefly amongst the

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\* The distant reader should be informed that Lafayette adjoins New Orleans immediately above, and contains some 8 or 10,000 inhabitants.

European emigrants, an extraordinary number of whom came over this spring. During the months of April, May, and June, 641 cases of *ship fever* were admitted into the Charity Hospital alone. June is generally the healthiest month of the year in New Orleans. Our citizens enjoyed their customary exemption from sickness during this month, with the exception of a mild *influenza* which prevailed to some extent immediately before yellow fever made its appearance.

As usual, the epidemic fevers gradually assumed a graver type, as the season advanced. Remittent bilious fever increased considerably in June, and soon after the 1st of July, *was merged into yellow fever*. Some of the severe cases of remittent fever resembled *yellow fever* so much that they would have unquestionably been pronounced such, if they had occurred a month later. Indeed, cases much less strongly marked than some of these, were pronounced *yellow fever* during the prevalence of the epidemic. But it is customary here not to call any thing originating here *yellow fever*, early in the season, unless *black vomit* is seen, or has occurred. If the patient should have recently arrived from Vera Cruz or Havana, he will be pronounced yellow fever, no matter how light his symptoms.

Let us now see how the disease began and when it was declared to be *epidemic* by the Board of Health. The term *epidemic* is used in this city as much to designate *the amount* of yellow fever, as anything else. Hence we sometimes hear people say—"we have a good many cases of yellow fever, but it is not epidemic." Also the inquiries—"have you any yellow fever? "Yes." "Is it epidemic? "No, or yes"—as the case may be. From such remarks it may also be inferred that yellow fever, in its early stages, *does not always present such peculiar and decided symptoms as invariably distinguish the disease*.

So far as I could ascertain, the following is the first case of *black vomit* that occurred this season. The case was reported to me by Dr. A. Mercier.

An Irish drayman, who said he had lived in New Orleans about five months—residence near St. Mary's Market, in the upper part of the city—whilst on a visit to a friend who resided on Adeline street, three squares back of the Charity Hospital, was attacked with fever on the 21st of June. He soon became so ill that his friend would not permit him to return home, but sent for Dr. Mercier. Dr. Mercier found him laboring under high fever, with the usual pains in the head, back &c., but as it was so early in the season, he *did not suspect yellow fever*—thought it only an attack of bilious remittent. He bled him copiously and continued to treat him, but the fever proved very obstinate, and about the 11th day began to look so much like yellow fever that he invited Dr. Landraux to see the case. Dr. Landraux concurred with Dr. Mercier that it was now *a decided case of Yellow fever*, with every prospect of death by *black vomit*. He continued to get worse—turned yellow—had hemorrhage from the gums—threw up *black vomit* for ten hours before death, and died on the 3d of July, the 14th day of illness.

The following is a list of *the first ten cases* admitted into the Charity Hospital, made out by myself at the time of occur-

rence; or rather, this is an abstract from notes taken by myself and some of the attending physicians. The main object in view was to ascertain in what parts of the city they occurred and whether there was any connection between them.

*First cases of yellow fever at the Charity Hospital, in 1847.*

*Case 1st.*—Wilhelm Renners, age 28 years—a seaman, native of Prussia—arrived here from Liverpool, about 5 years ago—has lived in New Orleans ever since, mostly in the Third Municipality or lower part of the city—worked on the levee loading and unloading vessels—went to Brazos Santiago and returned about 15 weeks since. Entered the hospital on the 5th July, had then been sick with fever six days. Commenced throwing up *black vomit* on the evening of the sixth and died on the 7th. *An unquestionable case.*

*Case 2d.*—John Gooder, Englishman—age 19 years—a steamboat man—last from Halifax, Nova Scotia—in New Orleans 12 months. Entered the hospital on the 4th July, then sick 4 days—died with *black vomit* on the 8th. *Unquestionable Case.*

*Case 3d.*—Christopher Muhl, a German—age 27 years—a cooper by trade—arrived in this city on the 12th April 1847—had suffered from diarrhœa for a month before getting here. Lived in the lower part of the city. Has been admitted and discharged from the hospital on three different occasions on account of his bowel-complaint. Was admitted last on the 3d July, having fever, but complaining chiefly of diarrhœa. Took astringent medicines, which stopped the diarrhœa and he became much worse—on the morning of the 8th commenced throwing up his food and drinks, and at 7 P. M. *black vomit* appeared—this continued until the 10th at 10 o'clock A. M., when he died.

N. B. The postmortem examination of this case created some doubts as to its being genuine yellow fever. No *black vomit* was found in the stomach or intestines. The gastro-intestinal mucous membrane throughout was infiltrated with limpid serum—it was in a dropsical condition—that of the stomach was of a rose color—there was a slight abrasion near each of the orifices of the stomach, not larger than the finger nail, but no appearance of blood about them. There was about 2 quarts of clear serum in the peritoneal sack—lymphy deposits over the surface of the liver, spleen and heart. Adhesions between the heart and pericardium, also between the lungs and ribs. The liver and spleen were very dense, the latter enlarged. The kidneys were granulated; the left greatly hypertrophied, the right atrophied. The blood coagulated readily. The body and eyes were very slightly yellow. Several experienced physicians who witnessed this examination concluded that the case was not yellow fever, but chronic gastro-enteritis terminating in hemorrhage, alias *black vomit*.

*Case 4th.*—Christopher Antoine—a German weaver—age 48 years—arrived from Havre, 6 months since. Residence on St. Phillip street—entered hospital July 10th, then sick 7 days—died on the 11th with hemorrhage from the mouth and anus, but no *black vomit*. The corps became yellow. *No doubts expressed about the case.*



*Case 5th.*—G. W. Sherman—age 25 years—has been in New Orleans the last 5 years—thought he had yellow fever three or four years ago—lived in the Third Municipality—business on the levee, loading and unloading steamboats and ships. Entered hospital on the 10th July—said he had then been sick about 10 days. Complained of great restlessness, pain in the head and back, sick stomach—eyes injected, skin yellow—died on the 11th, with convulsions. The corps was very yellow, lower part purple.

This man did not throw up black vomit, but there was no doubt as to its being yellow fever.

*Case 6th.*—Susan Antoine, age 49 years, the wife of case No. 4, residence same; entered hospital July 11th, then sick with fever 8 days—eyes injected, skin yellow, slight hemorrhage from gums. This patient was convalescent on the 13th and recovered.

*Case 7th.*—William Rose, seaman, native of Canada, aged 22 years; a cook and steward on board the schooner "Belle," at present engaged in the U. S. Service, arrived here from the mouth of the Rio Grande, on the 29th of June, and remained on board the schooner across the river at Algiers; was exposed to the sun a good deal. Was attacked with violent headache, fever and sick stomach about 11 o'clock A. M., July the 6th; says he took five or six drops of laudanum. On the 7th the captain of the vessel gave him five purgative pills which operated very severely; he continued to vomit. The captain then gave him an emetic which vomited him severely. Says he continued to vomit and have fever and headache until Friday the 9th, when the ejecta were so acid and acrid as almost to excoriate the fauces. On Saturday the 10th he commenced throwing up black vomit. He was brought to the Charity Hospital on Sunday morning, July 11th. I saw him with Dr. Cross at 5 P. M. Found him asleep, as soon as he awoke, commenced retching—pulse 84 and soft; bowels open; no urine for two days; skin yellow; eyes muddy yellow; intellect clear; surface cool and dry; tongue slightly furred; but little thirst. Continued to throw up black vomit and died about 3 o'clock at night. *An unquestionable case of yellow fever.*

*Case 8th.*—James Cooper, an Englishman, aged 25, a seaman. Says he came from Vera Cruz about 3 months ago; is subject to epilepsy; when asked how long he had been sick; said three weeks, when he had the last fit; never felt well since. Entered the hospital on the 17th July and died with black vomit on the 19th July. The corpse turned very yellow. No autopsy. As yellow fever was not suspected when he came in, his particular residence in the city was not ascertained.

*Case 9th.*—Manual Davan, Spaniard, laborer; has lived about New Orleans mostly for the last two years, but never spent a summer here. Last residence in the Third Municipality. Entered the hospital on the 15th July; then extremely low; hemorrhage from mouth, hiccup, very yellow, no urine; been sick 4 days. Died at night, with black vomit; after death the stomach was found to contain black vomit.



*Case 10th.*—Adam Keepferler, a German laborer, aged 24 years; in New Orleans 6 months; lived near St. Mary's Market; worked sometimes on the levee and sometimes in the swamp back of the city. Entered hospital July 15th; said he had been sick seven or eight days. On the 16th I found him clear of fever; intellect clear; does not sleep well; has thirst, pain in the stomach, yellow skin, hemorrhage from gums; bowels open, urine free, pulse 80. July 17th, better; skin cool and moist, but very yellow; less hemorrhage; rather restless, but no particular pain; stomach quiet and easy.

This man continued very weak for some days; suffered very much from inflammation of both parotid glands, but they were relieved without suppuration; he convalesced slowly and was discharged on the 25th of July.

From this time admissions for yellow fever increased daily and soon became numerous.

On the 12th of July the Board of Health report the whole number of interments in the city, for the week ending July 10th, as having been 138, and make the first public announcement of the appearance of yellow fever. The following extract is taken from their proceedings, published in the papers of the day:

*"Meeting of the Board of Health, Monday, July 12th, 1847.*

\* \* \* \* \* Five deaths from yellow fever have occurred in the Charity Hospital, and two or three cases are still under treatment in that institution. They appear to have originated in the city; and no facts have come to light to prove any connection between these cases and the fever prevailing at Vera Cruz, or other foreign ports.

(Signed) W. P. HORT, Chairman.

A. HESTER, Secretary."

In their report for the week ending July 17th, the Board of Health say the whole number of interments was 143; of which 6 *died of yellow fever*.

In their next weekly report, up to July 24th, the whole number of deaths reported, is 131; of which 16 were from yellow fever.

In their next report for the week ending July 31st the whole number of deaths is 177; of which 47 were from yellow fever. In this report, the Board announce the approach of the epidemic, as follows:

*"Board of Health, August 2, 1847."*

"It having been well established by the observations of the physicians of the city, that the yellow fever is now prevailing in nearly every part of it, and further appearing by the reports of the medical men, of the public and private hospitals, and of the cemeteries, that the cases of this disease have been numerous during the past week, and forty seven thereof fatal—it becomes the duty of this Board to apprise the public, and particularly the unacclimated, that we are on the eve of an epidemic, that the latter may prepare to absent themselves in time, and avoid such exposure and imprudence as may increase their susceptibility to the disease. (Signed) WARREN STONE, Chairman.

A. HESTER, Secretary."

From this time daily reports were published in the city newspapers, and the deaths *from yellow fever alone* during the next week were 133. The disease and the mortality continued to increase, and pervaded all

ranks of society throughout the whole extent of the city. The greatest mortality occurred during the week ending the 5th of September, when the deaths, from yellow fever alone, amounted to 435. From this time the disease gradually declined, as will appear from the following extract from the November number of this Journal, in an editorial upon the "*health of the city*," written by my then colleague, Dr. Hester. Dr. Hester says: "After much labor and great care, we have compiled from the published reports of the Board of Health, the following statement which will speak for itself.

*Interments in the city of New Orleans, from the 3d of July to the 18th October, 1847, inclusive.*

For the week ending	10th July—Total	138—of yellow fever	5
"	" 17th "	143 "	6
"	" 24th "	131 "	16
"	" 31st "	177 "	47
"	" 8th Aug.	263 "	118
"	" 15th "	353 "	197
"	" 22d "	432 "	322
"	" 29th "	461 "	328
"	" 5th Sept.	540 "	435
"	" 12th "	491 "	355
"	" 19th "	257 "	169
"	" 26th "	181 "	85
"	" 3d Oct.	149 "	61
"	" 10th "	126 "	44
From the 10th to 18th	" "	148 "	53

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Total, 3,990. Of yellow fever, 2,241

Interments in the city of Lafayette, from July 26th to September 21st, inclusive—total, 793; of which 498 were from yellow fever. Thus making the total deaths of all diseases in both cities, 4,873; of which 2,739 were from yellow fever."

*Termination of the Epidemic.*—On the 18th of October the Board of Health published the following statement:

*"Meeting of the Board of Health, October 18th, 1847.*

The Board of Health feels authorized to make the announcement that the yellow fever, which has been prevailing as an *epidemic*, has for some time ceased to exhibit this character, and as such has now disappeared. At the same time it is proper to state, that the *sporadic* cases, which have always been seen for one or two months after the disappearance of epidemic yellow fever, must still be expected to prevail. (Signed) WARREN STONE, Chairman.

W. T. BRENT, Secretary pro tem."

Sporadic cases did occur until very late. The number of deaths from yellow fever reported to the Board of Health, for November, was 12; and for December 10. The last death reported from yellow fever, occurred in the week ending on the 25th of December.

The weather for the first half of November was so very warm, and the city was so rapidly filled up with returning inhabitants, as to give rise to some apprehension that the epidemic would be revived. But

such was not the case ; it had run its career and gradually died away. Yellow fever seldom prevails at this place as an *epidemic* longer than about *two months*. It then subsides, whether there be frost or not. The above announcement of the Board of Health was made *more than a month before the appearance of frost*, which was not seen here until the 26th of November. At the *equinox* we had rain and a pretty smart blow for a *single day*, but it then cleared off warm and continued so, with but slight deviation, for two months. So much for the rise, progress and decline of the epidemic. We have yet to speak of its general character, extent and mortality, and then to offer some special observations.

*General Character of the Epidemic.*—As there has been no extensive or severe epidemic (excepting this) in New Orleans, since 1841, when I came here to live, I have had to refer to physicians of much longer residence, for a comparison between this and others. All the older physicians with whom I have conversed on the subject seemed to agree that *the epidemic of 1847 was the most extensive that ever prevailed in New Orleans, but was not so malignant or severe as that of 1841 or 1839*. This conclusion appears to be strongly supported by statistics obtained from the *Charity Hospital and the Maison de Santé* at both of which institutions the mortality from yellow fever was less than was ever known before.

At the commencement of the epidemic, the attacks were generally so mild and yielded so readily to treatment, that there was considerable discussion as to whether it was *really yellow fever* that prevailed. It was not very long, however, before this point was universally conceded, and towards the 1st of September the disease became very malignant.

In previous numbers of this Journal, I have frequently alluded to the want of precision amongst the physicians of this city, as to the *particular symptoms which characterize yellow fever*. Hence the doubt and uncertainty so often witnessed when required to pronounce upon a case. Doubtless there are numerous cases so strongly marked from the onset, as to admit of no hesitation whatever ; but there are others, with symptoms so mild and progress so insidious, as to elude all suspicion, until patient and physician are alike startled by the sudden appearance of some *fatal sign*. Many cases cannot be distinguished from ordinary remittent and even intermittent fever, *unless they approach a fatal termination*. Some cases admit of doubt in the earlier stages—if promptly relieved, there is doubt after they recover—but if these same doubtful cases be neglected or maltreated and terminate *fatally*, they then generally become *plain enough*. How often do we find Doctors differing about the character of a case of fever, and at last see their decision directed more by the *attendant circumstances*, than by any real value of the symptoms *per se*. If the case occur when yellow fever is common, the *slightest similitude* may influence the judgment ; but if it should happen to be *the first suspicious case of the season*, or should occur *unusually late*, or out of season entirely, then the strongest evidence, such as *black vomit, hemorrhage, &c.*, will be required to settle the question. In the autumn of 1846, the members of the Board of Health (all physicians) differed so much about the character

of the prevailing fever, that a committee of three was appointed to examine the wards of the Charity Hospital and report the number of cases of yellow fever to be found there. In the performance of this duty, one member of the committee gave rather a reluctant assent to the discovery of only 6 or 8 cases, whilst another thought there were about 20 cases. The books of the hospital that year show the admission of 148 cases of yellow fever after the 1st of September, and 89 deaths.

In view of the facts just related, the term *yellow*, like the term *congestive*, as applied to *fever*, serves more properly to designate a *condition of the system or stage of disease*, than any *separate, distinct or specific form or kind of fever*.\* Symptoms which do not uniformly distinguish a disease from all others *before it has run its course*, or until death is about to close the scene, are unworthy to be called *diagnostic*.

During our late epidemic, all the forms of our endemic fevers were to be seen, such as intermittent, remittent, congestive, typhoid, &c., as may be seen by reference to the Statistics of Fever published in the last number of this Journal.

At the *Charity Hospital* the Admissions for Yellow Fever were 2811.  
Deaths " " " 895.

*Maison de Santé*.—(Private Hospital of Drs. Stone and Carpenter.)

Admissions of Yellow Fever, 334.  
Deaths, " " " 34.

These are extraordinary results. Heretofore, at the Charity Hospital, the deaths from yellow fever have generally amounted to about one-half of the admissions. In this instance they do not amount to one-third. The great mortality that usually attends yellow fever at the Charity Hospital is not at all surprising to those who are familiar with this institution. It receives the lowest class of patients, a majority of whom perhaps enter after the third day of illness, and a large number in a *moribund state*. In addition to all this, it is impossible for patients in a large hospital like this, crowded as it necessarily is during an epidemic, to receive those minute attentions so highly important when they are in a critical state.

As the *Maison de Santé* is a private hospital and receives none but pay-patients, they must necessarily be of a superior class and have better attention. Nevertheless the success here presented is most commendable, and would be creditable in private practice. If these statistics be correct, they certainly substantiate the mild general character of this epidemic. At the commencement, the attacks were generally mild and yielded readily to treatment, but towards the last of August and first of September they were very severe.

*Extent and Mortality*.—The disease pervaded the whole extent of this city and Lafayette, also Carrollton, Algiers, and down the river as far as the U. S. Barracks. In the family of Mr. Davis, at the Tobacco Warehouse, about three miles below Canal street, I saw five cases at

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\* See the remarks of Dr. Brown, of Woodville, Miss., on the term "*congestive*," in the Third Volume of this Journal, page 443.



one time. Dr. Wood, U. S. Surgeon at the Barracks, six miles below the city, informed me that he witnessed several deaths with black vomit in October.\*

As regards our own city, those quarters suffered the most which contained the *largest number of recent and unacclimated inhabitants*. Amongst these, the poorer classes, as usual, suffered the most, on account of their manner of living, exposure to the exciting causes, imprudence, &c. The Third Municipality, upper part of the Second, and back part of the city generally, having the largest number of small houses at cheap rent, necessarily contained the greatest portion of this class, and consequently suffered most. The central portion of the city, consisting of the First Municipality and lower part of the Second, having a greater number of acclimated and independent citizens, suffered least. The city of Lafayette, having fully doubled its population since 1841, was severely scourged. The localities around the two markets, St. Mary's and Poydras, in the Second Municipality, being densely inhabited by the lower order, were severely scourged. But it really appeared that the amount of sickness in different quarters was regulated *more by the character of the population* than by anything *especially pertaining to the locality*. The population about New Orleans is proverbially restless and moveable; hence many persons were taken sick on their passage from the city—some on board of steamboats going up the river; others at the summer retreats across the lake, as Covington and Mandeville, Pass Christian, Pascagoula, Biloxi, &c.

At Pass Christian several deaths occurred in persons who had recently gone over from the city; but the fever did not spread among the numerous visitors there. At Covington it did appear to spread, according to Dr. Gilpin, whose communication is annexed. On the Mississippi river, cases were taken to nearly all the landings as high as Memphis; but Rodney is the only place where the fever appeared to spread among the inhabitants, which we learn from Dr. Williams, whose paper will follow this.

It is altogether impossible to estimate with any accuracy the number of cases of yellow fever that occurred in this city during the epidemic of 1847. By many it is thought to have amounted to *twenty or twenty-five thousand*; but this calculation may be wrong. As there has been no extensive epidemic since 1841, and the population has been constantly increasing, there were doubtless more *subjects* for yellow fever than at any previous time.

*Mortality.*—The number of deaths from *yellow fever* reported to the Board of Health by the sextons of the New Orleans cemeteries was 2306. The number of interments from *yellow fever* in the Lafayette Cemetery, as published in the "*National*," a city newspaper, date 23d October, was 613. One of the New Orleans sextons neglected to report for two or three weeks. Many who died in this city were in-

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\* Dr. W. being absent from his post, Assistant Surgeon Sloan has kindly furnished me with a communication on the subject, which will be appended to this article.

terred in Lafayette and *vice versa*. I am inclined to think that 3000 would not be short of the number who died of yellow fever, in the two cities. Amongst them there were *twenty-three natives of New Orleans*—mostly children.

The newspaper above referred to contains a catalogue of 2729 interments of persons who died of yellow fever, and were buried in the cemeteries of New Orleans and Lafayette, in 1847. This catalogue gives the *date of burial, name, age and place of nativity*. The following classification of the ages at which death occurred may be interesting to the inquisitive reader.

AGE.	NO.	AGE.	NO.
Infants,	3	50 to 60 years,	103
1 to 10 years,	81	60 " 70 "	46
10 " 20 "	186	70 " 80 "	14
20 " 30 "	1098	80 " 90 "	3
30 " 40 "	671	90 " 100 "	2
40 " 50 "	250	Unknown,	269

Total, 2729; of which 1954, or *nearly three-fourths* were taken off between the ages of 20 and 40.

#### SPECIAL OBSERVATIONS.

*Second Attacks, &c.*—There were many instances of persons having the fever this year, who had had it before. Drs. Jones, Meux, Campbell, Picton, Beugnot and others have told me of cases whom they had attended themselves during previous epidemics. One of the worst cases that I saw recover this year occurred in an intelligent Irishman, who entered the Charity Hospital on the 2d of September, the fourth day of his sickness. He said he had had a raging fever for three days, attended with violent pains in the head, back, limbs, &c. The fever had then subsided; he was turning yellow, and had hemorrhage from the gums. A better marked case of yellow fever was never seen. This man told me that he had come to live in New Orleans in 1824—that he had an attack of yellow fever much like this in 1825; was attended by Dr. Ker, who pronounced it such—that he had lived here ever since, with the exception of 17 months spent in Mobile—and that he had enjoyed uniform exemption from fever during the whole intermediate time. He recovered and was discharged on the 12th of September.

It is the general opinion here and elsewhere, that if a person have yellow fever *once*, he will have it *no more*, provided he continues to reside in *yellow fever localities*. Now, that a *strong attack* of this fever does effect a *great degree of immunity* from it in future, does not admit of a doubt; but this is certainly not the case with *mild attacks*. Nor is the immunity just allowed, to be compared with that effected by an attack of small-pox, measles, whooping-cough or scarlatina, as I have heard asserted.

*Attacks among Creoles or Natives.*—The fever cannot be said to have prevailed as an epidemic amongst the Creole population. The adults may be said to have escaped the *decided form* of yellow fever almost entirely, though I have been informed by several extensive

practitioners that they saw a number of strongly marked cases amongst *creole children* under six years of age. Dr. J. H. Lewis, who lives in the Third Municipality, and does an extensive practice amongst the creole population, told me that he knew several creole children *to die with black vomit* during this epidemic. Many physicians here are of opinion that *creole children*, especially *whites*, are liable to yellow fever, but that it is generally so mild as to require but little attention, and but for the occasional appearance of black vomit amongst them, it might pass for some other form of fever. It has just been stated that there were twenty-three deaths from yellow fever amongst the natives this year.\*

*Negroes and Colored People.*—All colored people recently settled in New Orleans are liable to have yellow fever, perhaps equally as much as white people; but from some cause or other, the disease is certainly much milder amongst them. The number of attacks amongst negroes this year was very great, yet the mortality was extremely small. Mulattoes evidently suffered much more than *blacks*.

*Escapes from the Epidemic.*—Notwithstanding the general prevalence of yellow fever in 1847, many persons who had but recently settled here and had never had the disease, escaped this year. On the other hand, there were instances of persons who had resided here a number of years, escaped all the epidemics subsequent to 1840, and had the fever this year. There are numerous instances of persons who have resided here 15 or 20 years, without ever having yellow fever. These facts go to prove that a person may by some years residence become just as secure against the disease as if he suffers an attack; also that neither *an attack* nor *acclimation* will effect an invincible immunity.

*Treatment.*—What shall I say under this head? Such is the diversity of theory and practice pursued in *yellow fever* by the physicians of New Orleans, that it would be altogether vain for me to attempt to delineate it. Suffice it to say, that every conceivable variety of practice is pursued, from the use of the most *heroic remedies*, down to a virtual dependance on the *vis medicatrix naturæ*. The previous numbers of this Journal contain three systematic essays on the *cause, nature and treatment of yellow fever*, emanating from gentlemen who occupy the highest rank among the medical faculty of this city—I allude to the papers of Drs. J. F. Beugnot, P. A. Lambert and J. Harrison. In these essays, all the prominent remedies that have been resorted to in the treatment of this disease are ably reviewed, and their merits and defects fairly stated, after having been fully tested. They will always be referred to with interest by the student of yellow fever at this place, and are particularly valuable as illustrating the views of the leading

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\* Dr. Picton informs us that he really never was satisfied that yellow fever attacked *creoles*, until this year, when one of his own children, *a native of the city*, came very near dying of it. The same with respect to *second attacks*,—he attended a case this year which he had attended before with well-marked yellow fever.



French and American physicians of this city at the time. Of course many differ from these gentlemen; but the difference is in minor matters.

I deem it altogether useless to give the treatment which I pursued, but perhaps a brief allusion to a few of the most prominent methods pursued by our physicians would be acceptable to the reader.

In reflecting on the various remedies and plans of treatment in yellow fever presented to my view in the course of a pretty extensive and careful observation at the Charity Hospital, in the walks of private practice, and in conversation with my medical brethren, I think the whole may be designated under the following two general plans of theory and practice, viz., *the abortive and the rational or eclectic plan.*

1. *The Abortive Method.*—The object of this method is to *cut short the fever as soon as possible.* It was pursued by a few bold practitioners, who, however, resorted to very different means for its accomplishment: one set relied *almost exclusively upon blood-letting*, the other equally as much *upon the sulphate of quinine.* *The blood-letting plan* is as follows:—as soon as the chilly stage is passed and reaction fully established, the patient is set up in bed and bled in a full stream *to syncope*; a purgative enema and hot mustard foot bath are then administered. Reaction takes place, and when fully developed, the bleeding is repeated as before. And so on, as the reaction is strong and the patient can bear it. If the patient is unable to bear venesection, local depletion, by means of cups or leeches to the chief seat of pain, is resorted to. Some patients require to be bled four or five times, but generally not more than one or two free bleedings; with perhaps some cups or leeches. No medicine is given by the mouth,—the bowels are kept freely moved by enemata. The foot-baths and sponging the body are repeated *pro re nata*, with cold drinks and light covering, complete the treatment. This is the depleting plan *par excellence*, as practiced by the late Dr. Luzenberg, Dr. Beugnot and a few other leading physicians below Canal street. There are others who follow this plan somewhat modified—they deplete all cases and freely, but they give medicines also. If the patient be of such a temperament or in such a condition that he cannot be bled, local depletion is depended on; but these gentlemen look upon all such as have severe attacks and *cannot bear the loss of blood*, as being *very dangerous.*

*The Quinine Method.*—In the essay of Prof. Harrison, previously alluded to,\* may be found an interesting account of the introduction of large doses of the sulph. quinine in the treatment of yellow fever in this city, in 1839 and 1841.

If I am not mistaken, the gentlemen who first adopted the practice still admit the wonderful powers of the medicine, though they have since fallen into more of an eclectic plan. Assistant Surgeon Charles McCormick and Dr. A. J. Wedderburn are the only physicians, so far

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\* See Dr. Harrison's paper on Yellow Fever in the Second Volume, November No. of this Journal—also Dr. McCormick's papers on the use of Quinine, &c., in the same Volume and Number.



as I know, who pursued this practice *in its full extent*, in the treatment of this epidemic. I shall therefore give their methods as obtained from themselves. As practised by Dr. McCormick, it is as follows :—when the fever is fully developed, a purgative enema and mustard foot-bath are first used, and from 15 to 30 grains of quinine then given *to subdue the fever*. If the pain in the head is *very violent*, he is bled from the arm, or cups are applied to the mastoids; otherwise, blood-letting is dispensed with. The large dose of quinine seldom fails to reduce the excitement in a few hours, and then he gives 15 or 20 grains of calomel with or without as much of the quinine combined. The foot-baths and enemata are repeated *pro re nata*; the bowels are freely purged; the fever vanishes, and the patient seldom requires more than the third dose of quinine.

Dr. Wedderburn first orders an enema, consisting of a table-spoonful of mustard in a quart of warm water, which he says evacuates the lower bowels more promptly and efficiently than anything else. Then comes the hot mustard foot-bath, and afterwards the following dose ;—  
 ℞ Pulv. Rhei. grs. x, Pulv. Ipecac. grs. ii, Submuriat. Hydrarg. grs. v, Sulph Quinine, ℥ i, mix in syrup and give at once. Sometimes he first gives 15 or twenty grains of quinine with 20 or 30 drops of laudanum suspended in water, and the above powder immediately afterwards. This purges freely in six or eight hours, and the quinine and laudanum are afterwards repeated according to the pain and fever. The purgative mentioned happened to be the one he mostly used last summer—he admits that some other might have done as well. This is his most general course. if the attack be very severe, and the patient suffers violent pain in any part, he at once gives from 20 to 30 grs. of quinine combined with 40 or 50 drops Tr. Opii, or 2 or 3 grs. of opium. According to Dr. W. this dose rarely fails to extinguish both the fever and pain in a few hours. Drs. McCormick and Wedderburn both speak in the most exalted terms of their abortive methods of treating yellow fever. Dr. W. *never bleeds from the arm*, and very seldom orders either cups or leeches. Other physicians here use quinine freely in yellow fever, but not like the above named gentlemen, *to cut the fever short at once*.

There is one thing worthy of special notice in connection with this method of treating yellow fever, which is, that although the fever may be cut short, the disease is not always necessarily removed. Convalescence is not at once established; but the patient occasionally lingers in a feeble, though cool, quiet and painless state for some days, and then sometimes dies with black vomit. It would seem that the alterations in the blood, &c., produced by the morbid cause, still go on, to terminate in health or death, although what is called *the fever* is extinguished. Dr. Harrison mentions this fact in his essay before mentioned, and it is well known to many of our physicians. It has been remarked, that even when the fever *was not cut short by any potent medicine*, but spontaneously subsided in 24 or 36 hours, as it sometimes does under the use of mild remedies, the prostration would be as great and the convalescence as tedious as if the fever had run its usual course for 72 hours. Hence it is thought that *the febrile poison must be eliminated through the natural emunctories*, before healthy reaction can be estab.

lished. With some, this might constitute a serious objection to the *abortive method by quinine*; but it certainly is an important consideration to be able to relieve the painful and distressing symptoms, by a remedy which does not prevent the execution of any other indications that may arise. Nor can it be denied that when pain and febrile excitement are reduced, the system becomes much more amenable to the action of any remedies that may be indicated.

Under this view of the matter, I think the introduction of *sedative doses* of the sulphate of quinine may be considered a valuable improvement in our therapeutics of yellow fever. There evidently exists considerable prejudice against this method of using quinine, and we hear of physicians, both in this city and elsewhere, who state that they gave it a fair trial, and it did not answer their expectations. For my own part, I think it very doubtful whether they have given it a *fair trial*—they are *afraid of it*—in short, *they have not learned how to use it*.

As to the fact that patients are sometimes unexpectedly lost after all fever and pain are subdued, Dr. Wedderburn says that in all such cases as have come under his observation, it proceeded from the most *culpable imprudence*. They are so promptly relieved of all pain and fever, that they do not allow sufficient time for the system to recover from the shock it has sustained.

2. *The Rational or Eclectic Method.*—This method is founded on *experience and rational observation*, but independent of scientific induction. The object of this method is *not to cut short the disease*, or take it entirely out of the hands of nature; but rather to *guide the patient through the natural stages of the fever, and to address proper remedies to the symptoms as they are presented*. If blood-letting is plainly indicated, they bleed—if any particular organ seems to suffer most, they address their remedies chiefly to that, and so on.

A *rational eclecticism* is the *platform*, to use a phrase that recently has come much in vogue in the politics of the day, on which the great body of the Medical Profession stand at the present day, in the treatment of most diseases. The very existence of *specifics* is doubted by many, and we have to be guided by *general principles* until we learn from *experience* the *peculiarities* belonging to diseases in different regions and localities, and the adaptation of certain remedies to meet these peculiarities. That different climes and localities do give striking peculiarities to the diseases which prevail in each, is almost universally admitted by those who had extensive opportunities for observation.

Such being the object and views of the advocates of the *rational or eclectic* system, they go to work accordingly, each prescribing the remedies which he has found by experiment best adapted to meet the symptoms, and most of them falling into more or less of a *routine*. Nor, under these circumstances, is it surprising either that there should be a great diversity of practice, or that the practice should vary in different places and seasons. The general practice in yellow fever pursued in New Orleans is not always the same, because the type of fever is not always the same; and it generally differs from that pursued in Mobile, Vera Cruz, Havana, Charleston, Natchez, Vicksburg, &c., because each of those places presents some modification of the disease. It would be

almost impossible to describe all the plans of treatment pursued by the rationalists in this city, but perhaps I may succeed in giving an outline of a few of the more prominent *routines*.

I may state that *venesection* is used with great caution by the rationalists—they foresee a stage of depression or exhaustion, that will inevitably appear at the decline of the fever, and therefore endeavor to economise the powers of the system as much as possible. Cupping over the chief suffering organs is much oftener resorted to. Mustard pediluvia are universally administered. In the first stage of the fever, a purgative of some kind is invariably administered. Some give an efficient dose of castor oil; others prefer a mercurial cathartic; others a saline. The bowels having been freely evacuated, local symptoms relieved and a general perspiration established, absolute rest and quietude are rigidly enjoined, and the fever is permitted to go on to its natural termination or crisis, which generally takes place on the *third day*. This is truly the *critical stage* of the disease, for the fate of the patient will soon be decided. He must either die or begin to recover very soon. A new set of symptoms are now presented, requiring different remedies altogether from those first used. Blisters, gentle stimulants, anodynes, antacids, &c., are now called in requisition and demand the utmost skill of the physician. Many patients are doubtless saved after getting upon *the very verge of black vomit*; but after this discharge becomes established, they are generally considered beyond the reach of medicine and have to depend upon the efforts of nature and the kind attention of the nurse. A variety of medicines have been recommended for black vomit, but so far as I have been able to ascertain, not one of them possesses any *reliable virtues*. French brandy, porter and ice are depended on more than anything else in this stage, by the physicians in New Orleans. Some physicians, amongst them a few eminent practitioners, after relieving the first distressing symptoms, by means of a purgative, the mustard foot-bath and cupping, put the patient at once on the solution of the sulphate of ferro-cyanate of quinine, 5 grains a dose every two hours, until the fever completely subsides. When the critical stage arrives, they treat it pretty much like those just mentioned. I cannot descend into the minutiae of practice, but such is an imperfect outline of the practice pursued by the rationalists. As before stated, their object is *not to cut short the disease, but to guide the patient safely through all the natural stages of the fever*.

There are, doubtless, cases which will prove fatal in spite of anything that can possibly be done. From the time the disease is declared, the patient is a *doomed victim*. He is either overwhelmed irresistibly at the outset, or the poison works its ravages *so stealthily* as to escape observation until it is too late for remedies. Witness the case of Dr. Dashiell, in which black vomit unexpectedly appeared whilst a man was getting shaved in a barber's shop, at Vera Cruz. I myself have seen a man lying quietly in his bed at the Charity Hospital, *reading a book*, whilst the fatal black vomit was already upon him. He seemed to be surprised at the minute inquiries I made about his case, and as I turned away, asked if I thought *he was in any danger*? I gave him an equivocal answer, and left him in blissful ignorance. He



resumed his story, and I saw him no more. The next morning he was dead.

It has been shown that the most robust class of people and at the most vigorous age are the favorite subjects of yellow fever. Such persons do not complain at trifles ; they often pay but little attention to the first symptoms of disease, and only take to their beds when completely overpowered, thus losing the most important time for treatment and lessening their chances of recovery. Thus the hardy mechanic or outdoor laborer is often lost ; whilst the more delicate, sensitive and prudent gentleman or lady is preserved. As to the *amount of success* attained by the followers of the *rational method*, it is impossible for me to state it. So far as I have been able to ascertain from some of the most extensive practitioners, it was at least *very gratifying to themselves*.

*Homæopathy*.—I cannot close my remarks on the treatment of yellow fever, without a brief allusion to a novel practice which has recently been introduced into our city, and like all novelties, has captivated some of our citizens. I allude to *Homæopathy* and its practice. In the autumn of 1846, Dr. Taft, apparently a modest, intelligent and genteel young man, came from the North and settled himself in New Orleans, to practise this new system of medicine, up to that time unknown in these parts. Having gone before the Board of Examiners, presented his diploma, (I know not from what medical college,) and obtained license regularly, he soon met with great encouragement and was really established into a lucrative practice at the time the epidemic broke out in the summer of 1847. As he was unacclimated, and of course might expect to be attacked, he was asked by a friend "what physician he would employ when he should be attacked with yellow fever?" His reply was—"Dr. Taft." Sure enough, in the month of August he was severely attacked, and Dr. Taft being immediately on hand, was called on to attend Dr. Taft. He at once resorted to his infinitesimal doses of Homæopathic medicines, and continued them until the end of the second day, when he became so ill, that his friends insisted on calling in medical aid, *nolens volens*. Two of the most respectable regular practitioners of the city were called in and did everything in their power to save him, but the precious time for active treatment had been lost, if *not worse than lost*, and he fell a victim to his own folly.

With Dr. Taft died *Hamæopathy* in yellow fever for the season ; but the reports of his successful *debut* went abroad throughout the land, and the vacancy created by the disappearance of "*Yellow Jack*" and *Dr. Taft* was soon filled by a host of Homæopathic physicians, chiefly from the "land of steady habits." They seem to find much favor in the sight of the community during the *healthy season of the year*, but whether, like the martins, they will vanish when the "Dog star rages," remains to be seen.

*Hydropathy*.—I heard of but one physician who pursued the hydropathic treatment, though there may have been others. Dr. S. W. Dalton, a regular licentiate, early in the epidemic fell upon the following simple method, with which he says he was so well pleased, that he pur-



sued it throughout the season. As soon as the fever was fully developed, and when the pains in the head and back were most severe, he enveloped the whole body of the patient, from the neck to the thighs, in a thick bandage of cotton or linen cloth, and then placing him in a large tub, poured cold water upon his head until he became perfectly cool and thoroughly *soaked*. He says this never failed to remove all pain and make the patient comfortable. He was then put into bed, and the covering tucked closely about him. In a short time, he broke into a profuse perspiration and went to sleep. If the heat and pain returned, the cold water was re-applied. In the mean time, the bowels were freely opened with castor oil, cool drinks were given, and this constitutes the whole treatment. Dr. D. says he treated more than 200 cases in this way, with the most gratifying results.

As a part of the history of the epidemic, I give Dr. Dalton's statement; it may go for what it is worth.

There were some other new systems of practice tried in this epidemic by a few persons, who probably could attract attention in no other way than by some innovation. Among them was *the system of Raspail*, or the *Camphor practice*. It called forth some flaming puff's in the newspapers, but I saw nothing of it myself, and only heard of an occasional case where an intelligent physician had been called to see an unfortunate victim who had thrown away his life by trusting to such nonsense.

As to the extent of yellow fever up the river from this place, I may give the following memoranda, in addition to the papers of Drs. Cartwright, Williams and Hicks, which are to succeed.

There were several cases at the village of Plaquemine, also at Baton Rouge and Bayou Sara, but not enough to be called *epidemic*. I believe no cases occurred at Grand Gulf. There was a pretty severe *epidemic* at Alexandria, on Red River.

At Memphis, several cases were landed from the steamboats, but no person contracted the disease from them. One *original case* occurred at this place, the following notes of which were kindly furnished me by Dr. James Young.

CASE.—J. S., a silversmith, aged about 30 years, of a robust constitution and sanguine temperament. Had lived about Memphis some seven years—was taken sick on the 14th of September, soon after returning from the country, whence he had ridden 25 miles in a buggy. At first complained of something like *a cold*—felt chilly and had pain in the head, back and limbs. Dr. Young was called to see him on the 15th, and found him with a hot skin, eyes red and watery, tongue covered with a white fur and moist, pains, &c. His fever subsided on the fourth day of his illness. Then there appeared slight hemorrhage from the fauces and anus, with suppression of urine, and subsequently *black vomit*. He died in convulsions on the 21st September and 7th day of sickness. He had black vomit 36 hours before death. The corpse turned very yellow after death.

Dr. Young having practised in one or two epidemics of yellow fever at Natchez, is familiar with the disease, and had no hesitation in pro-

nouncing this a *plain case*. I see no reason to doubt the correctness of his diagnosis.

Yellow fever prevailed to a considerable extent in our squadron at Vera Cruz and on the Gulf of Mexico. Surgeon Isaac Hulse, U. S. N., who is stationed at Pensacola, informed me that some interesting reports on the subject had been made to the Bureau at Washington City, by Passed Assistant Surgeon John Hornby and Assistant Surgeon A. N. Bell.

I have finished my task. I did not take up my pen to write a disquisition on yellow fever, but to endeavor to give some historical account of the most extensive epidemic of that disease that has ever ravaged this city. I crave the indulgence of my Professional brethren in this city, towards any defects they may discover in my humble effort. If they would do their duty, they would speak for themselves and not trust to the imperfect observations and representations of another. If I have done anything towards making up the medical history of the times, the object of my labor is accomplished.

I shall here append the following communication from Drs. Sloan and Gilpin, and afterwards those received from other places. It will be recollected that Dr. Gilpin's letter was published in the November No. of this Journal, under the head of "Health of the Country;" but I think it proper to re-produce it here, by way of completing the connection.

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GENERAL HOSPITAL, New Orleans Barracks,  
July 27th, 1847.

DEAR SIR:—I send you, in accordance with your request, the only observations made upon the subject of the yellow fever last year, by Surgeon Wood, U. S. A., that are on record at the Hospital. You will perceive from his remarks that a separate report upon this subject was forwarded to the Surgeon General's office, at Washington. No copy of this report is on file here, except one of my reports to Dr. Wood, Sept. 30th, 1847. This I send you, but fear it will be of little service.

I would remark, that nearly all the persons attacked in Hospital were, under treatment at the time for some chronic disease. The only exception, I believe, to these cases was that of a woman, an Hospital Matron, who died from black vomit. She had not been sick previously, kept away from the city, but was exceedingly fearful of an attack of the fever.

My own opinion of the fever can be given in a few words. I believed it yellow fever, modified by the less virulent condition of the cause that existed in the city. Our location seemed to be on the outer circumference of a poisoned circle, where distance, perfect ventilation, and the best internal and external police rendered less violent the effects of the predisposing cause. I do not believe that the disease as it existed here was contracted in the city.

. Accompanying this, I send you a rough estimate of the number of sick in this Hospital during the months the fever prevailed in New Orleans, with the proportional number of cases of yellow fever.

Very respectfully and truly yours, &c.,

WILLIAM J. SLOAN,  
Assistant Surgeon, U. S. A.

Dr. E. D. FENNER, New Orleans."

Extract from Surgeon Wood's Quarterly report of Dec. 31st, 1847.

"In September and October many cases of yellow fever occurred, some mild and some exhibiting malignant symptoms, as black vomit, &c. No fatal cases occurred before the 1st of October. The small number of cases reported and the large number of deaths, is to be referred to the fact that the fever attacked many who had been registered and under treatment for other diseases."

Report made to Surgeon R. C. Wood, U. S. A., by Assistant Surgeon Sloan, Gen. Hosp., N. O. Barracks, Sept. 30th, 1847.

"The cases of fever that have come under my observation at this post during the prevalence of yellow fever in New Orleans, have differed from the ordinary fevers of this climate. These cases were characterized by the suddenness of the attack, the short duration of the fever, and great subsequent prostration. Persons were seized, without any premonitory indisposition, with violent rigors, followed by fever, with intense pain in the head, loins and limbs; the eyes were suffused. These symptoms yielded readily to treatment in twenty-four or forty-eight hours, leaving the patient extremely debilitated. I have no hesitation in ascribing these attacks to a modified condition of the poison of yellow fever in the atmosphere—modified in a ratio corresponding to the distance from its centre of action in New Orleans, and rendered comparatively harmless by the excellent police of the hospital and garrison, and the care observed in preventing exposure to the sun and transitions of temperature.

Fever of a similar type has prevailed in other localities near the city. In my own case, the attack differed from any I ever experienced. In Capt. Fenner's family, (all of whom were attacked,) the disease was remarked to be entirely dissimilar to the fevers of North Alabama, their former residence. I should hesitate in denominating these attacks yellow fever, since they were wanting that train of violent symptoms so characteristic of the disease, that tend to the very disorganization of the body; yet, at the same time, I must believe them a type of the disease modified as before mentioned.

In regard to the treatment adopted, it was simple and effectual. Submuriat. Hyd. gr. xv, followed by Ol. Ricini, was administered at the commencement. Frequent mustard pediluvæ and the free use of warm drinks were very beneficial in promoting free diaphoresis. After the violence of the fever had abated, Sulph. Quinine, grs. xx, once or sometimes twice a day, were administered with good effect, without the necessity of further repetition. In some cases, after free purgation, when the fever had not abated, where there was still pain in the head,

with a quickened pulse and dry skin, twenty grains of Quinine were beneficial and followed by perspiration during the day ; the remedy was repeated with good effect. In one or two cases, I gave the Quinine and Calomel in combination, with good results. The local symptoms were relieved by cups to the temples, sinapisms to the epigastrium, ice to the forehead, &c. Total abstinence from solid food and perfect rest were strictly enjoined.

Whole number of sick in General Hospital, N. O. Barracks, for the months of July, August, September and October, 1847, with the number of cases of Yellow Fever, and deaths therefrom :—

Months.	No. of sick in Hospital.	Cases of Yellow Fever.		Deaths f'm Yel. Fever.	
		Months.	No.	Months.	No.
July, August, September and October.	411	August, 1847	2	October 8	2
		September "	9	" 12	2
		October "	8	" 18	1
		November "	1	" 21	2
		—	—	November 10	1
		Total	20	Total	8

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*Dr. Gilpin's Letter.*

"COVINGTON, LA., October 22nd, 1847.

"In answer to your letter of the 18th, which I did not receive in time to acknowledge by return mail, I take the earliest opportunity of replying to.

"Several families of Germans and Dutch, *who have resided in New Orleans two or three years*, came over here the latter end of August to escape the fever in New Orleans, and took possession of some uninhabited houses. About the fifth day after their arrival, one man was taken sick ; from what I can learn, no physician saw him for two days ; he died the fourth day, with black-vomit. In the meantime another man and his wife (also emigrants) were taken down and both died in a similar way. After a day or two, two of our citizens who had been with the sick, and attending on them, were also taken down with a similar attack ; and after this the disease spread generally through the immediate neighborhood where it is thickly inhabited ; from this it spread through the town, except that portion where I reside, which is separated by a small branch from the town. We have all kept well.

"I may safely estimate the number of cases from 160 to 180; out of which, with other diseases, there have been eleven deaths, one of which was from consumption, and ten of fever.

"I have seen eleven cases from New Orleans, who were taken sick either immediately on their arrival, or within a day or two after, some at Madisonville, some at Lewisburg, and some here ; those cases have not varied in the slightest degree from the patients I have attended here. I do not think it genuine yellow fever. The persons have generally been attacked severely ; the fever has commonly been subdued in thirty-six hours, but has left the system very much exhausted. In my own practice in the place, I have lost only one patient—that from relapse. I



have not bled in any instance, have only given Calomel to one person, and only cupped one—I have relied entirely on external applications, castor oil, injections and quinine.

“There have been several instances of persons coming from the country to the town on business, several of whom soon after have been attacked with fever, and generally have died, mostly of black-vomit.

“The fever has entirely subsided here for the last five or six days. In haste. J. G.”

II—*On the Yellow Fever of Rodney, Miss., in the year 1847*, by W. G. WILLIAMS, M. D.

To E. D. FENNER, New Orleans.

DEAR SIR :—Your letter of the 13th of December last was duly received, but owing to various circumstances I have been prevented from replying sooner. As I shall be compelled to be brief, I will endeavor to confine myself to a simple reply to your interrogatories, without indulging in any speculations on the subject of yellow fever, except so far as the nature of your inquiries may demand.

“Interrog. 1st. At what time did yellow fever make its appearance at your place, and what were the prevailing diseases immediately preceding it?”

Ans. It is my opinion that the first individual who died of yellow fever was a man who returned to this place from New Orleans, sick, about the 18th or 19th of July, 1847, and who died on the 23d. As respects the health of our town it was good at this time. This applies to the surrounding country as well as to the village itself.

“Int. 2nd. What was the condition of the place at the time, in a hygienic point of view?”

Ans. I have not observed any change of importance in this respect since 1837. Our place was, I think, in as cleanly a condition as it ever is during the summer and fall seasons. As regards this locality, I refer you to a letter furnished you on this subject, and published in the first number of this Journal, (May No. 1844.)

“Int. 3d. Please describe the commencement of the disease, its progress, general features, and decline. Did it disappear before frost?”

Ans. As I have already observed, I believe the first death from the disease occurred on the 23d of July. On the 27th of this month and on the 11th of August, two individuals were taken sick in the same or an adjoining room. These were his attendants. One of them, a white man, informs me he was confined about a week; had fever, but does not know what was the matter with him. This man was taken on the 27th July. The other, a negro woman, it is said had an intermitting form of fever. I did not see either of them while sick. Between this time and the 27th of August, some whites and a number of blacks, were sick in this immediate vicinity. On the night of the 30th of August I was called to see a man in this part of the town, and found him dying of hemorrhage from the bowels. He had been complaining of indisposition a few days, took his bed on the 27th and died of yellow fever on the 30th, with hemorrhage. An individual who was in his room when

I saw him, and much about him during his illness, was the next person I was called to see, sick of this disease, and this was on the 2d of Sept. On the 6th of this month I visited a gentleman, who resides in a distant part of the town, but is confined by his business to that part of the village where the fever cases occurred.

I will here state that in 1843, the first case of yellow fever occurred at the other extremity of the place, and that the disease for some days was confined to the family, in which this case occurred and their attendants. This has been the case, I think, this season. It was very circumscribed in its operation for a length of time, and confined to the immediate vicinity of the first case. On the 8th, we concluded we were on the eve of an epidemic, and by the 15th the disease pervaded the entire place.

On the morning of the 8th or 9th, I was called to see a man who had been ailing for some time, and who was supposed to be jaundiced. He was able to walk about his room at the time I saw him. His tongue was clean. His hands were cold. His pulse thready. His countenance was expressive of both despondency and indifference. His intellect seemed clear, but when interrogated, he replied in a deliberate, and abstracted manner. He became delirious on the evening of the day I saw him, and died with black vomit the day following. The next person I was called to see, was a man who was much with the individual above alluded to and occupied the next house. The progress of this case was rapid, as black vomit made its appearance in 30 hours from the commencement of attack. Up to this period, we had much contention respecting the true nature of the disease, but the circumstances of this case, particularly the vomit (which was the unmistakeable coffee grounds) convinced the most skeptical. The disease was characterized by the same general features as in 1843. No one who had the disease here in 1843 took it this season, and very few, probably not more than five or six who never had the disease, escaped. This is as true of our negroes as of our white citizens. The disease ceased for a time before frost, the mornings became very cool, and frost was reported to have been seen. This induced a number of our citizens to return, several of whom took the disease. This occurred as late as the 9th of November.

"Int. 4. Had you any quarantine regulations? If so, were they rigidly enforced, and with what benefit?"

Ans. No quarantine regulations have ever been established at any time at this place.

"Int. 5. Do you believe the fever originated in your place, or was it brought there? Give the grounds of your belief."

Ans., I do not believe that this disease originated here from local causes exclusively; some of my reasons for this belief, you will find in my reply to your first, third and next interrogatories.

"Int. 6 Did you see any evidences of the contagiousness or infectiousness of the disease?"

Ans. I think so; and in addition to what I have already said touching this point, I will state a circumstance that occurred in a family I attended. A man with a family consisting of a wife and two children, left the place, and removed five miles into the country. He took pos-

session of a small cottage, containing two small rooms. A man who was in his employ, left the village about the same time, and took one of these rooms. The man and his wife and two boys occupied one room, and this individual the other. This man took the disease on the 5th day after leaving Rodney, and died on the 8th. The family waited on him during his illness, and four days after, the two boys took the disease. They had been twelve days from town, and must either have carried the seeds of the disease with them when they left, or contracted it from the man who died in the adjoining room. Of many who fled and where sick in the country, none took the disease after the 6th or 7th day, except these two boys. The mother had the disease before she left the village, and the father on his return to it, after the recovery of his sons.

"Int. 7. Did you see any instances of other forms of fever running into yellow fever, or the reverse?"

Ans. I saw a case that resembled in some of its features congestive fever, and I think might have been mistaken for that form of disease. It seemed to me to partake of the nature of both congestive and yellow fever, corresponding in all respects to neither. I feel confident that the two diseases were blended in this case. I saw one individual who had intermittent fever, with some of the symptoms of the prevailing epidemic, and another who during convalescence had a periodic fever. Are not intermittence and remittance attributable to a physiological condition rather than to the action of a special cause? Do not various diseases assume these types, and why may not yellow fever? The phenomena that constitute what we understand by the term *fever*, are the same in small-pox, scarlatina, measles, yellow fever and bilious fever. Fever I apprehend to be nothing more than an expression of nervous vascular irritation. A man has a chill; reaction comes on and we have a condition that we designate by the term *fever*. After a while an eruption makes its appearance, and constitutes it a case of small-pox, measles, or scarlatina; or the distinguishing marks of yellow fever may present, and we have a case of this disease. All these may assume an intermitting or remitting type. So far as the phenomena that constitute *fever* are concerned, they are the same in all; and I have witnessed as much diversity of opinion, and seen as much difficulty in christening measles, scarlatina and small-pox, as yellow fever.

"Int. 8. What remedies or course of treatment did you find to be most efficacious?"

Ans. The only material difference in our treatment of the disease during this epidemic and that of 1843, consisted in the more liberal use of quinine; which was attended with very satisfactory results.

"Int. 9. Have you ever seen any cases of the ordinary endemic fevers of your vicinity terminate in hemorrhage and black vomit?"

Ans. I have not.

I have thus hastily endeavored to comply with your request; and I assure you, that nothing but a disposition to oblige you has prompted me to the task.

Very truly, yours,

WM. G. WILLIAMS.

Rodney, Miss., February 10, 1848.



III.—On the Yellow Fever of Vicksburg, Miss., in the year 1847. By  
B. J. HICKS, M. D.

To DR. FENNER, New Orleans.

DEAR SIR :—Your letter of the 20th ultimo, in which you make inquiry in regard to the history of the epidemic fever which prevailed in our city during the past autumn, has been received, and with pleasure I furnish you with such facts as came immediately under my own observation. The hygienic condition of our town was such as would most certainly produce disease. The months of July and August preceding were unusually warm, the thermometer ranging from 90 to 94° in the shade, with frequent showers of rain succeeded by sudden bursts of sunshine. In a portion of the city there were many old uninhabited wooden buildings in a state of decay, with foul confined air between the floors and in the cellars, which must necessarily have been very inimical to health. The attention of the city authorities was urgently and repeatedly called to these sources of disease; but nothing was done to correct the evil; every hope and trust being placed in the establishment of what they considered a *rigid quarantine*; and whilst all were relying upon this shadow, and sleeping as they supposed in safety, the leaven of destruction was ripening from the putrid exhalations emanating from undoubted causes existing directly amongst us.

Our diseases until the 30th of August were of a mild intermittent character, but as soon as the burning rays of a southern sun had done their work, we had presented to us a fever of a most malignant character, proving fatal in most of the cases that occurred until a northern blast stamped a milder feature upon the face of the epidemic.

It is the opinion of many of our most experienced physicians that if the condition of the atmosphere had continued as in the commencement, we should have had a most devastating epidemic, more fatal perhaps than that of 1841; and that we were indebted to the Ruler of the elements for the mild character which the disease suddenly assumed as soon as the wind changed to the north; thus modifying the poisoned air and rendering it less noxious to man.

The first case of yellow fever occurred on the 31st day of August, at the house of Terrence Owen, in the north-eastern portion of the city, remote from the river, in the person of James Trynor, a young Irishman of temperate habits and good constitution. When first called to see him, I found him complaining of violent pain in the head; he stated that he felt as if an iron band had been drawn tightly across his forehead, insupportable pain in the back, aching of the joints, universal soreness of the flesh, as if he had been beaten with sticks, eyes highly injected, constipated bowels, great irritability of stomach, rejects everything taken, also mucus with occasional flocculi resembling small particles of blood subjected to the action of muriatic acid. These symptoms continued with but slight abatement until the 4th of September, under the most prompt and energetic treatment, such as repeated cups to the nucha and epigastrium, ice to the head and hot mustard pediluvia every four hours, active enemata, aperients of *massa hydr.* and *ext. colocynth.* compound. Irritability of stomach still existing—a blister plaster 10 by 10 inches was applied over the epigastrium, and as



soon as vesication was produced, the cuticle was ordered to be removed and blister dressed morning and evening with  $\frac{1}{2}$  gr. of morphine and 10 grs. sulph. quinine—free suppuration was encouraged by dressing with the unguentum resinosum. On the 6th of September a favorable change took place. The patient gave evidence of the violent concussion the system had undergone during the progress of the disease, presenting a dusky lemon hue over the whole surface, which first commenced over the chest and around the mouth, quickly extending itself over other portions of the body. About the 9th of September the patient was discharged cured, convalescence being both complete and rapid.

A few days after Trynor sickened I was invited by my valued friends Drs. Broadnax and Balfour, physicians to the city hospital, to examine the body of a patient, Hugh Wilson, who had just expired in that charitable institution; of which invitation I availed myself. About five hours after death, in the presence of Drs. Nutt and Magruder and Messrs. Ford and Brown, medical students, I proceeded to make a post mortem examination.

The body presented a surface of a dark lemon hue, interspersed with dark colored spots. A black fluid had issued from the mouth, resembling coffee grounds. The stomach was of usual size, mucous coat highly injected, many of the vessels to the extent of being ruptured—of soft consistence—contained about  $\frac{2}{3}$  x of a dark colored fluid, with granulated particles resembling coffee grounds which did not color water when mixed with it, but would settle at the bottom of the vessel, leaving the water perfectly clear. The small intestines contained a dark colored fluid similar to that found in the stomach. Mucous coat inflamed, but to a less extent than that of the stomach. Large intestines contained a fluid resembling the sediment of port wine; mucous coat injected; of a more florid red than that of the stomach and small intestines. Nothing remarkable about kidneys, except presenting a yellow tinge. The liver somewhat softened in consistence, the great lobe of a spotted yellow color; left lobe of a more regular orange hue; gall bladder distended with a dark tenacious fluid, of the consistence of tar. Throat and head not examined.

Wilson had been engaged in laying brick in this city for some months previous to his illness; had no communication with any vessel ascending the Mississippi river; had not visited any sick person for some weeks; neither had he seen, or been near the quarantine depot. He was admitted into the hospital on the 3d day of September, and died on the 6th. The history of his case I have not been able to procure.

Whilst returning from this trip of investigation, my friend Dr. Magruder informed me that he had a patient laboring under a similar disease, the Rev. Dr. Teavel, whom on the following day I was called to see. I found him laboring under incipient black vomit and in a sinking condition. He expired the next morning, after throwing up large quantities of this fluid. He had been for some time engaged in the duties of his station, in holding a protracted meeting, and had not been near the quarantine depot, steamboat landing, or visited any sick person for some weeks. His residence was in the centre of the square upon which the old uninhabited buildings in a decaying condition spoken of above were

located, and immediately north of an old theatre which had been a short time previously torn down and removed by order of the city authorities, disengaging large quantities of poisoned air which had been the product of fermentation for years, which no doubt was wafted by the southern breezes directly into his bed chamber and thus in part poisoned his system. Several other cases occurred upon the same square, simultaneously with that of Dr. Teavel; a Jewess, Henry Wirtz, and Mrs. Jane Porter, all of which terminated fatally; the first and last about the 5th day of the attack, the second lingered for several weeks, having relapsed. Not having been physician to the foregoing cases, I cannot give the history and treatment, but only mention them as being interesting in connection with the origin of the disease, not one of them having had any intercourse with steam boats, quarantine depot, or even been absent from the city for months previous, and up to this period no person sick of yellow fever had been permitted to enter our city. The attentive health officer strictly and faithfully discharged his duty. The fatal tendency of the disease produced great alarm and excitement amongst our citizens, many left their homes and fled for safety to the country. But in a few days the wind shifted to the north, and the fever assumed a milder type, which caused many of our citizens to return to their homes and resume their daily occupations.

On the 19th of September I was summoned to visit Daniel Montgomery. I found him complaining of severe pain in the head, eyes highly injected, pain in the back and lumbar region, soreness of the flesh, constant aching and tired feeling in the extremities, great irritability of stomach, vomiting incessantly.

*Treatment.*—V. S.  $\frac{3}{4}$  xx, pills of blue mass and comp. ext. colocynth, which were immediately rejected; twelve leeches applied to the epigastrium, active enema; ice to the head and hot mustard pediluvia every four hours.

10th—Patient still restless, stomach irritable; enema had acted three times; complained of violent pain in the eyes and forehead; irritability of stomach still very distressing. Blister plaster 10 by 10 ordered to epigastrium, leeches to the temple, iced gum water for drink, mustard pediluvia ordered to be repeated.

11th—Irritability of stomach still continues; distress insupportable; throws up large quantities of mucus; entire absence of bile; blister had drawn well; remove cuticle and dress with morph. and sulph. quinine.

12th—Patient passed comparatively a quiet night; pulse 90; skin soft; morph. and quinine dressing continued.

13th—Black vomit; appeared to be sinking; ordered enemata of camphor grs. v and quin. sulph. grs. x, every four hours, in mucilage. This prescription arrested the vomiting, but as soon as the vomiting ceased, the patient complained of partial loss of vision and delirium.

14th—Pulse full and regular; skin soft and moist; tongue furred in the centre, with red edges; hemorrhage from the nose and gums; total loss of sight; cannot distinguish a bright sunshine from the darkness of a clouded night; eyes had the appearance of being natural with the exception of slight dilatation of pupils and an injected condition of the conjunctiva. Blisters ordered to the temples and nucha, suppuration of

the blistered surface on the epigastrium encouraged by dressing with the unguentum resinosum, brandy toddy and arrow root.

15th—Pulse more feeble ; hemorrhage from the bowels ; subsultus. Camphor and sugar of lead enemas ordered every four hours ; brandy toddy and arrow root continued.

From this time the patient continued to sink gradually from the exhausting hemorrhages from the nose, gums, bowels and urethra, until the 24th, when he expired, after having been sustained by the extraordinary means adopted after the appearance of black vomit—I am of opinion that the patient would have sunk on the 5th day of his attack had he not been sustained by the camphor enemas. I have never witnessed a recovery after the appearance of black vomit, except by the camphor treatment.

On the 29th day of September, I was called to see Thomas McConnel, whose residence was on the same square as that of Dr. Teavel. I found him entirely delirious ; could not keep him in bed ; pulse 128, full and hard ; violent pain in the head and back ; eyes highly injected ; great restlessness ; aching feeling in the extremities ; universal soreness of the flesh. Ordered blood-letting  $\frac{3}{4}$  xxx.  $\mathcal{R}$  massa hydr. comp. ext. colocynth. *a a*.  $\mathcal{O}$  i., make 8 pills. Take four at once, four in three hours ; ice to the head ; hot mustard pediluvia.

30th—Pulse 100, skin soft, medicine had acted twice ; tongue red on the edges, furred in the centre ; pain in the back ; tired, aching feeling in the extremities. Ordered cups to the epigastrium ; warm mustard bath, mucilaginous drinks.

Oct. 1st—Patient spent a restless night ; suppression of urine ; epistaxis ; irritable stomach ; rejects every thing taken. Ordered the following enema.  $\mathcal{R}$ . spir. turpentine  $\mathfrak{z}$  ij, Tr. assafoet.  $\mathfrak{z}$  ij, mixed in  $\mathfrak{z}$  iv. mucilage ; blister plaster to the epigastrium.

2d—Hemorrhage from gums and nose ; irritability of stomach subsiding, slight passage of urine, enema had acted once ; patient restless ; remove cuticle from blister ; dress with  $\frac{1}{4}$  gr. sulph. morph. and grs. x of sulph. quinine, morning and evening.

3d—Hemorrhage from gums and nose very much increased ; considerable hemorrhage from blistered surface, so much so as to wet the patients bed with blood. Dress blister with 4 grains sulphate of iron, grs. x. sulph. quinine and  $\frac{1}{2}$  gr. sulph. morph.

4th—Excessive hemorrhage from the gums, nose and bladder, universal yellowness of the skin, pulse small and frequent ; nearly suffocated with the bleeding from the gums whilst sleeping ; bloody froth issues from the mouth ; friends suppose him to be dying. Blister dressed with sulph. quin. and sulph. ferri.; ice to the head ; sinapisms to the extremities.

5th—Slight improvement ; patient more rational ; slept calmly several hours ; hemorrhage still continues from nose and gums ; morph. and quinine dressing for blister with the unguentum resinosum ; this readily caused suppuration which invariably improves the gastric symptoms. The quinine and morphine dressings were continued until the 8th, when the patient was discharged cured and, as was generally the case, convalescence was rapid.



Blood letting, cupping or leeching, mustard baths, enemata and the endermic use of quinine and morphine in the advanced stage of yellow fever, have proved more successful than any other course of treatment adopted by the physicians of this city, so far as the writers' observations have extended. In fact, in all cases in which the stomach, the main citadel, has been taken possession of by disease, the endermic use of remedies is the principal reliance for a successful issue of the case, and deserves the consideration of the profession. Many patients have been hurried out of existence, by crowding an already irritated stomach with nauseous draughts. I have related the three cases above, to give some idea of the general character of the disease, but the greater number of the cases were of a much milder type. All cases were initiated with the same symptoms, differing in degree; some would readily yield under the milder remedies, other cases would assume a more malignant or typhoid character. In the mild cases, there was an early appearance of a prickly heat eruption, which was a sure indication of a speedy convalescence. This eruption never occurred in the malignant or typhoid cases, but occasionally fine petechiæ, which I supposed to be an effort of nature to throw the eruption to the surface. But her powers being too feeble, she failed to accomplish her design. All cases of disease ran into the epidemic type. The yellow fever commenced at the close of the month of August. In the course of ten days it had become decidedly epidemic, prevailing to a very great extent. Nearly all of our citizens felt its influence, though the disease had become remarkably mild, not more than three per centum proving fatal.

The disease subsided about the 25th of October, at which time we had a slight frost, though a few sporadic cases occurred until the 10th of November, when all nature was clothed in ice.

Our city has been visited with epidemic yellow fever during the years 1841, '43 and '47. That of 1841 was of a most malignant typhoid character, one case out of every four proving fatal under the best treatment. The epidemic of 1843 was more limited, of decided inflammatory symptoms, and less fatal; about one death in six. The epidemic of 1847 may be properly styled *mild epidemic yellow fever*, being remarkably easily managed, and only about 25 deaths out of nearly 800 cases. In consequence of the mild character of the disease, many doubted whether it was yellow fever or not, and some difference of opinion existed amongst the physicians, as was the case in 1841, until nearly 200 of our citizens had been taken to the burying ground. Nearly all of the cases that terminated fatally, closed with black vomit, except those in which excessive hemorrhages occurred. I have never witnessed black vomit in the endemical fevers of our vicinity, but have often met with miasmatic fevers of a heavy grade in which hemorrhages from the nose, gums and bowels were not unfrequent in the closing stage of the disease.

From all the facts that we can gather from the history of yellow fever as it has heretofore prevailed in this city, we have not been able to trace a single instance in which it showed the least disposition to manifest a contagious character.

In 1837, when the city of Natchez was laid waste by its devastating influence, numerous cases in every stage of the disease, from the initiary



symptoms to the black vomit point, were landed from boats and ushered into crowded filthy boarding houses, with ten or a dozen in a room, and in not a single instance did a nurse or attendant become affected with the fever, though many of those landed died with black vomit. Such was the case in 1839—the writer attended numerous cases that were landed from boats from Natchez, our city being then crowded with paupers who were flying from disease and contagion as they supposed, as is usual in our southern cities when an epidemic breaks out; but in no instance did he witness any disposition to contagion.

In 1841 many citizens fled from Vicksburg when the epidemic was declared to exist. A large portion of them sickened at different points, and many died; Judge Anderson in Bolivar county, Dr. Weller and his son in Raymond, Messrs. Vail and Davenport in Clinton, all of whom had numerous attendants and in no instance did any of their friends or nurses sicken with the disease, notwithstanding they all died with black vomit, the ripe stage of contagion, if contagion could be.

During the past season, in vain did the advocates of contagion look for a source of disease from importation. They asserted that Dr. Teavel had visited the quarantine depot and had thus taken or contracted the disease, and that Trynor did not have yellow fever because he did not die. But it was ascertained that Dr. Teavel had not been within a mile of the quarantine landing since its establishment. The evidence of local origin was so plain that the advocates of contagion became quiet, our city authorities suspended the quarantine regulations, commerce resumed her sway, the resounding echo of the signal cannon relapsed into silence and steam boats were permitted to glide to our wharfs, all being satisfied that we were suffering the penalties of sanitary neglect.

Your friend,

B. J. HICKS.

Vicksburg, Mississippi, January 20th, 1848.

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IV.—*On the Yellow Fever of Natchez, Miss., in 1847.* By SAMUEL A. CARTWRIGHT, M. D.

DR. FENNER,

DEAR SIR:—I have just returned from a three-month's tour to the North, for the benefit of my health and to pick up medical information, and I find among my letters one from you so far back as the 17th of December last, which I now proceed to answer.

In regard to your questions about yellow fever of last year, I have to inform you that we had in Natchez only a few sporadic cases.

I was called to see Mr. Haffner, a German, from the Rhine, who had been living in this city for a year or two, and had always been healthy—a tailor by trade. He had not been out of town during the summer, nor any where among the sick. He resided in a low, confined place, and the back yard was very dirty. He died on the fourth or early on the fifth day, with genuine yellow fever, on the 2d. of October. I saw another case which died on the 6th of November, on the third day. He was a stout Irishman—had not been out of town or any

where to contract the disease. He lived in a close, confined room, and dirty, ill-ventilated back-yard; his name was O'Rourke. He lived in a different part of the town from Haffner, and a month or more occurred between the two cases. These were the only two cases I saw in town; but some three or four other sporadic cases occurred. A German woman died in October of yellow fever, and my overseer, also a German, living on my plantation, 6 miles from Natchez, in La., went to see the woman with yellow fever when he was exposed to the same local causes which gave it to her. Late in October last I visited New Orleans. On my return, Mr. Grejer, my overseer, I found had died, during my absence in N. Orleans, with yellow fever. Black vomit very copious and frequent. None of my negroes nor any of the persons who attended him took the disease; nor did any of the persons living near O'Rourke and Haffner take it. The reason why so few had the disease, I attribute to the fact that most of our people are acclimated and are not susceptible to it. For instance, we had the fever in the epidemic form in 1837 and 1839, and in 1844 we had a good many straggling cases. We have had little or no accession to our population since, and consequently no subjects for it. We have had what is called a quarantine, and may attribute our exemption since 1839, (1844 excepted,) to the quarantine. Those persons trace or pretend to trace the cause in 1844 to Woodville or your city, and not being able to trace the cause of last season to any foreign origin, they doubt whether the cases above stated were yellow fever. I think there is no doubt of it.\* In fact, for the last twenty-five years, I have seen cases of yellow fever almost every year, originating, as I believe, here under some strong local or predisposing causes.

In one of your questions, you ask if yellow fever disappears before frost? I have known it to continue for some weeks after frost, when it begins late in the season—and quit before frost when it begins early. I have seen many cases after several frosts. The quarantine regulations were not rigidly enforced. People would land on the other side

\* In confirmation of the testimony here given by Dr. Cartwright, in regard to the effects of quarantine at Natchez, I will add the following memoranda, kindly furnished me by Dr. James Young of Memphis, Tennessee, a talented and accomplished physician, who resided in Natchez in 1844. They are given in his own words.

“NATCHEZ, 30th September, 1844.

Called to see Dr. Craig this evening at 7 P. M. The Doctor informed me he had been sick three days. October 1st.—He commenced throwing up black vomit at 5 o'clock, P. M. 2d.—At 5 o'clock, A. M., threw up black vomit, again at 7 o'clock, and died at 10 o'clock, P. M. Dr. Craig was seen by Dr. Cartwright and Dr. Davis.

Samuel R. Hammitt, attacked with *yellow fever* 19th October,—sick five days.—*Recovered*.

T. Cranch, attacked with *yellow fever* 28th October,—sick ten days.—*Recovered*.

The three cases of yellow fever occurred in Natchez, when the city was generally healthy.

Neither of the patients had been where the disease was prevailing, nor had either of them seen any individual laboring under the disease. J. Y.”

of the river and cross over in the Natchez ferry boat, or below town or above the quarantine ground. One of the landing places was humorously called the upper quarantine.

5th and 6th Interrogatory.—I believe the yellow fever originates in Natchez. From 1825 to '35 we had no quarantine, and the yellow fever was imported into Natchez almost every year, but it never spread, and no one ever took it from the patients themselves. The boats sometimes seemed to be infected.

9th Interrogatory.—“Has yellow fever prevailed at your place before?” Yes—epidemically in 1817, 1819, 1823, 1825, 1837, 1839. A few cases almost every year, and a great many cases in 1829 and 1844—but not epidemic.

I have, in answer to your 10th question, seen a few cases of the ordinary fevers terminate in hemorrhage and black vomit,\* without being, as I thought, yellow fever, properly so called. Yellow fever I take to be a disease separate and distinct from bilious fever. It gives a peculiar expression of countenance to the patient. It is I believe an American disease. If contagious, it is not more so than the common bilious fevers. All fevers are more or less contagious, and all diseases for that matter, in one sense of the term, as they vitiate the atmosphere.

Very respectfully, your obedient servant,  
SAMUEL A. CARTWRIGHT.

V.—*On the Yellow Fever of Houston, Texas, in 1847.* By WILLIAM McCRAVEN, M. D.

HOUSTON, TEXAS, Jan, 12, 1848.

DEAR SIR :—I did not receive yours of the 10th ultimo, till about the 1st instant, and take pleasure in furnishing in reply such information as the data in my possession will permit. In answer to your first interrogatory: The first case of yellow fever occurred here on the 4th of October. A case of rather doubtful character had occurred four days previous and was then on hand. As it excited a good deal of interest here, and, as I think, there can be little doubt that it was yellow fever, at least in the end, I will give some account of it. Mr. V. had been indisposed at Galveston for three or four days. Yellow fever was then prevailing at Galveston, though not admitted to be epidemic. He had two or three light fevers then, as he informed me, and took some purgatives and quinine, but most of the time was actively and laboriously employed. He arrived here on the evening of 30th September. He had fever that night, but was up in the morning, and took dinner with

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\* The fact here stated by Dr. Cartwright, is confirmed by Dr. Thomas Fearn, of Huntsville, Ala., and Mr. W. P. Hort, of this city, two distinguished physicians now retired from the practice. I obtained their testimony in recent interviews with these gentlemen. I myself have seen cases of *bilious fever* terminate in fatal hemorrhage from the mouth and bowels, though not black vomit, in Hinds Co. Miss. I might differ with Dr. Cartwright as to yellow fever being “a disease separate and distinct from bilious fever,”—but will take some other occasion to argue the point.



some appetite. In the afternoon he was taken with rigors and violent pain in the head, back and extremities, attended with fever. In this condition I was called to prescribe for him. He was alarmed and restless—thought he had yellow fever and was apprehensive of the result. His pulse was a good deal accelerated, quick and compressible—his skin hot and dry—his eyes suffused and red, tongue moderately coated with whitish fur, and red on the tip and edges. The symptoms were strongly indicative of yellow fever. But the preceeding symptoms—the decided remissions which had evidently occurred—the time which had elapsed since fever first made its appearance, threw doubt on the case, and rendered a diagnosis uncertain. It was evident to me he was not in the 4th or 5th day of yellow fever. I enquired if his eyes had been previously inflamed. He told me they had been red and somewhat inflamed, but had gotten well.

I regarded the case as doubtful, but determined to treat it as yellow fever. The fever continued with little abatement until the third day. The pains were mitigated, but not relieved entirely. On the 4th day, fever was almost gone, but I did not think him entirely free till the 6th. The skin and eyes were decidedly icterose. He was desponding and very nervous. Dozed a good deal and muttered in his sleep, which was light and interrupted. Often changed his position. For about 24 hours he appeared much improved. Tongue cleaned off—had some appetite and read a newspaper. Skin moist and heat well diffused. His gums had been bleeding a little for a day or two. On the evening of the 4th he had an operation which showed appearances of blood. He rested tolerably well and had no further movement till next morning, when his discharge consisted almost entirely of blood, but without any pain, except a little uneasy sensation just before a movement took place. The tongue became healthy in appearance. The extremities continued warm; skin moist, and pulse very little above the natural standard, ranging from 80 to 90. In despite of all remedies the hemorrhage continued, and he died on the 10th, retaining his mental faculties till a few hours before his death. Indeed, for a day or two previous, his mind appeared less clouded than in the earlier stages of his illness. I was informed by one of his attendants, that just before he died he threw up black matter, which was probably black vomit; but as I did not see it, and the attendant had never seen black vomit, I am unable to speak positively upon the subject,

This was probably a case of yellow fever supervening on ordinary remittent, and was almost an exact counterpart of a case, the first which originated here in 1844.

On the morning of the 5th Oct., I was called to see Mrs. W. She was taken the evening previous with chilliness, attended with fever and excruciating pains in the head, back and limbs. I saw her in this condition. There was but little redness in the eyes. In the evening she was better. She complained of ringing and exceedingly disagreeable feeling in her head, from the effects of quinine. Next morning she was free from fever, and continued so, notwithstanding the excitement and distress she passed through afterwards. This was a slight case, though the symptoms were severe at first. If it had



occurred alone, I should not have regarded it as yellow fever. I have seen such however.

Mr. T., her brother, was ill in the house at the same time; he was taken with the same symptoms on the morning of the 4th. Sick 24 hours when I saw him. His eyes were quite red; pulse frequent, quick and compressible; tongue fiery red on the edges and tip, partly coated and partly as though it had been scalded and the epithelium peeled off; restless and thirsty. His was a well-marked case of yellow fever of a bad type, and as his constitution was very delicate, I augured unfavorably of its termination. It did not run a regular course however. Fever declined gradually, but did not leave him till the 6th day. His tongue at one time had been very dry and almost black, especially on the denuded portions, became moist and looked well. He had become very yellow—had some appetite and no thirst. He was cheerful, and I thought almost out of danger on the 10th. But that night he grew worse. I found him on the morning of the 11th, much to my surprise, with dry hot skin, great thirst and restlessness; tongue again dry. He died on the evening of the twelfth, with all the characteristics of yellow fever, including black vomit, which occurred just before his death.

Mr. W., of very feeble constitution and nervous temperament, was taken on the evening of the 6th, two days after his wife, with severe symptoms. Fever abated on the 3d day. Got out of bed and lay on the sofa. Being a self-willed, obstinate man, with some very strange notions, he did just what he pleased. Amongst other imprudences, he ate some very indifferent water-melon. On the 10th, he dressed himself and went into the adjoining house, as his own family were all sick, and he wished to be quiet. On the 11th, he went to his store and remained till evening. This was the 6th day from his attack. He returned home and spent a restless night. In the morning I found him in bed, perspiring freely; surface warm, pulse about 60, and of pretty good strength. He appeared strange and very slow of comprehension. He gradually became more and more stupid—complained of nothing—had no fever, and extremities warm—drowsy—sleep troubled—muttering—eyes half closed. He became unconscious towards evening and very restless, often attempting to get out of bed, and requiring considerable force to restrain him. Skin and eyes yellow. He died on the night of the 13th, eighth from the attack—did not vomit after his relapse.

Miss W., daughter, and Miss T., sister of Mrs W., were taken on the 7th with same symptoms, but of milder character. Miss W.'s fever lasted two or three days, and left her languid and listless for several days. Her eyes were very yellow; her skin of a dusky reddish hue, as though the superficial capillaries were congested—a circumstance which I have frequently observed in yellow fever. And hence, probably, arises the great danger of exposing convalescents to a draught of cool air before the system has had time to recover from the shock. The power of generating heat is so feeble that the system will cool down under the influence of a current of cool air, almost like an inanimate substance. I came near losing a patient under such circumstances in 1844. All symptoms of the disease had disappeared. He was lying between two windows and had fallen asleep without cover. He was

almost as cold as a corpse and nearly pulseless, yet seemed unconscious that anything was wrong. It took an hour or two of the most active stimulation external and internal to rouse him. No serious inconvenience seemed to follow. But to return to my subject. Miss T. had very little fever after the first day, and indeed not much then, but like all the rest, was chilly and had intense pain in the head. She insisted for a day or two that nothing else was the matter. For several days her stomach was very irritable, and most that she threw up was of a grass green color. She and Miss W. both recovered, but were much debilitated for several days. Had Miss T's case occurred alone, I should not have regarded it as yellow fever; but occurring as it did with four others, all at the same time, in fact every member of the family was down at once, I could not but consider it of the same character with the rest. She was not much jaundiced. A young man who had been boarding in the family was taken about the same time—said to be yellow fever. I did not see him. They were all unacclimated.

On the 20th and 22d, two cases occurred in the adjoining house—fever with rigors at the commencement; violent pain in the head, back and limbs; red watery eyes; fever abating on the third day, with much debility; skin and eyes yellow—in fact, regular cases of yellow fever throughout. Both recovered. These are fair samples of the cases as they came under my notice. They were not numerous at any time in my practice. It could not, I think, at any time be fairly regarded as an epidemic, and the best evidence of this fact I think was, that our ordinary fevers prevailed at the same time and greatly predominated over the yellow fever cases. This was not the case in 1844. In August of that year, I scarcely met with a case of fever that did not distinctly present the features of the epidemic. From about the time of the last mentioned cases till the middle of November, a good many scattering cases were reported. Quite a number of Germans, recently arrived and settled around the suburbs of the town, died. What proportion had yellow fever I do not know, as they were mostly attended by German physicians, who I think did not regard the cases as yellow fever; but whether they were familiar with the disease or not, I am unable to say;—can only speak of two cases which I was requested by some charitable ladies to visit, as the family had not much confidence in the attending physician. I was at the time informed that one of the patients was throwing up black vomit, and it was not expected that anything could be done for him, but something it was hoped might be done for the other case. When I called one was just dead, and while I remained, the other threw up black vomit and died next day. I was informed that the other had vomited matter of precisely the same appearance, and from the signs which I saw, I have no doubt it also was black vomit. The attending physician, I believe, though I had no conference with him, called the cases *congestive fever*, at least I so understood from the father, an intelligent German, who could speak a little English. From these cases I supposed that probably a good many of the Germans had died of yellow fever; but this is only a supposition. The cases among the American part of our population were not numerous, but the deaths in proportion were considerably greater than in 1844. I saw one case, a black, on the 1st

of December, which bore a strong resemblance to yellow fever. I would observe here, that some authors, I believe, deny that the blacks are subject to the epidemic, which is undoubtedly a mistake. They were subject to it here both in 1839 and 1844. I attended a number the latter season, as well-marked cases as any I saw. The disease, however, according to my observation is seldom fatal with them. The prevailing disease at the time that yellow fever made its appearance, was ordinary *remittent* or *bilious fever*, which, as I before observed, continued to prevail throughout the season. Dysentery had been more than usually prevalent for the last year. In the preceding winter, *typhoid pneumonia* prevailed and proved fatal in a good many cases, especially among the blacks. During the past twelve months I have had some six or eight cases of *typhoid fever*, the first I have met with in Texas: all in children under 12 years. They continued from 15 to 30 days. All but one recovered. In the early part of summer, also, we had a remarkably large number of cases of *jaundice*, of which I suffered myself, much to my surprise, as I was at the time of my attack in perfect health, not having been confined to bed a day since I had yellow fever here in 1839. It has appeared to me that for some years all our diseases were becoming more and more ataxic. I seldom meet with cases in which the lancet or any other mode of depletion can be judiciously employed to any great extent. Mercury, too, perhaps for the same reason, I find a very doubtful remedy in fevers. In fact, I seldom now employ it in fever, except in combination with mild purgatives, given occasionally in small quantity.

I have already answered your 1st and 3d questions.

2d. The town was in a tolerably cleanly condition. It is situated on the border of a flat prairie, and although there is no marsh in its immediate vicinity, the prairie is so level, that with the exception of that portion of the town near the bayou, it drains slowly. It is, however, much better drained now than formerly; and the soil is of such a nature, that when well drained, it dries rapidly. Our prevailing winds blow over the open prairie about a mile before reaching town. On the north of the town, the country is timbered for three or four miles, and our north winds are always regarded as unfavorable to invalids, particularly in the fall season. If not attended with rain, they are remarkably dry, and in summer hot.

4th. We have never had any quarantine establishment.

5th. The question whether yellow fever is of foreign or domestic origin, is one on which I have never been able to satisfy myself fully. I am not a partizan of any particular theory on the subject, but have diligently sought for facts on which to base an opinion. I was until last year strongly inclined to the belief, that with us it was always of foreign origin. In 1839 I was here, but not professionally engaged. I had the disease about the 22d of October. It prevailed then in a malignant form. It commenced, I think, about the 1st of September and continued till near the last of November. Our population was then probably less than 3000, and I think there could not have been less than 200 victims to the epidemic. The town was then in a remarkably filthy condition. It was crowded with persons out of employment and destitute of means, many of them intemperate. When taken with the



fever, they had neither the necessary comforts nor the means to procure them, and sickness was so general that it was exceedingly difficult for a stranger to get proper attention even if he had money. It is not surprising that many died. I cannot speak positively respecting the first cases which occurred then, but think they came from New Orleans. Such I know was the impression on my mind at the time, but I cannot now recall the grounds on which it was based. This was the first appearance of yellow fever in our town, and it prevailed very generally, as but few of our citizens had had the disease, and most of those who had not, were attacked. It did not disappear till long after frost. Frost always I think operates as a check upon yellow fever, but if warm weather sets in afterwards and continues long, the epidemic will revive again and may be as bad as ever. A good frost I believe destroys the cause.

The second appearance of yellow fever in this place, was in July, 1844, and of this epidemic I can speak with confidence, as I was actively engaged professionally through the whole of it, and several of the first cases were under my charge. The first case arrived from Galveston, on the 10th of July, I think, and placed himself under my charge—he was then in the third or fourth day of his attack, without fever, but very nervous and greatly debilitated. He continued so for several days and recovered. I had three or four other cases under similar circumstances—all having taken the disease in Galveston and come up in the boat. About the last of July I had a case which occurred in town and ran a course precisely parallel to that of Mr. W. cited above, and terminated in hemorrhage and death. In this case yellow fever seemed to supervene on another disease. About this time I saw a case of black vomit incidentally, but as the patient was not under my care, I do not know its history. About the 1st of August cases began to appear frequent, and in a few days the epidemic became general and spread rapidly through town, the cases from Galveston appearing to act as *foci* of infection. By the 1st of September it had nearly exhausted itself in the densely populated portions of town, but lingered about the outskirts for another month and disappeared long before frost. The latter part of the fall was healthy. During its prevalence, scarcely any other form of disease manifested itself. Few unacclimated persons escaped, and none to my knowledge (and I made diligent enquiry) had the epidemic who had suffered a previous attack. The epidemic was comparatively mild, and the proportion of deaths small, though it presented a malignant aspect at Galveston. The fever ran from one to three days, and although it left the sufferers weak and exhausted, convalescence was generally rapid and complete in a few days. Black vomit was not a very common symptom even in fatal cases. Death I believe seldom ensued before the sixth or seventh day. The town was in a much better condition than in 1839, but worse drained and less cleanly than at present; and there is still great room for improvement.

As to the origin of the fever here the last season, all the facts seem to point directly to a *domestic origin*. I could trace no connection between the family of W. and any other case of yellow fever. Mr. V., it is true, had been sick four days when the two first cases of yel-



low fever occurred; but they occurred in a distant part of the town, one of them in a female who seldom went out, and I can trace not the slightest connection between them and V. The only plausible mode by which it could be traced to a foreign origin, would be to ascribe it to goods received from abroad, (W. and T. being merchants,) but this I think extremely improbable. On a careful review of all the circumstances, I can come to no other conclusion than that it was local in its origin.

6th. I have never believed yellow fever to be strictly speaking contagious. But I have frequently thought I could trace evidences of infection. My experience the last season has added to these evidences, yet I will not pretend to aver that they are not all deceptive. It is certain, however, that in nearly all the cases that occurred for two or three weeks, a connection either direct or indirect with the W. family could be traced; for instance, at least six of the attendants had the fever and another who visited the family once or twice, had it. A young man and his two sisters visited and watched with them regularly. He was present when T. died, and asked me if the attendants were liable to take the disease? I told him I thought they were more likely to do so than others, but that if he was taken ill and would take medical advice at once, I thought he need not feel any alarm, as he was accustomed to a hot climate. In a few days, he and both his sisters passed safely through the fever. The physician who attended these cases was unacclimated; he was soon after taken with the fever and died. Two persons at least, who visited the house while he was ill, had the fever and one died. The lady in whose house Mr. W. died and her daughter were taken about a week after his death;—both recovered. A woman who assisted in nursing the W. family soon after died with black vomit. Not long afterwards, her husband also died of yellow fever, as was said; but I do not know whether he had black vomit or not. It is at least remarkable in a season, when so few cases occurred, that so many of them should have had intercourse with yellow fever patients, and in fact I could trace such intercourse in every case which came to my knowledge for several weeks. It is true, that all the unacclimated who had intercourse with the sick were not attacked; but I believe most of them were. The evidence which I have been able to collect is strong in favor of some kind of infection, growing out of intercourse with the sick. The more strictly I have scrutinized the matter, the stronger has the proof appeared.

I give you the facts for what they are worth.

7th. The case of V. I regarded as a different form of fever, terminating in yellow fever. I also met with a case, the first I saw originating in town in 1844, and to which I have already referred, as terminating in the same way. I have also met with some cases in which yellow fever ended in a slow remittent form of fever, which lasted 8 or 10 days. These cases, however, have been rare.

8th. In reference to the treatment of yellow fever, the cases which occurred in my practice last year were so few that I would be unwilling to deduce any general rules of practice from them. Therefore, most of what I have to say upon this subject will be based upon my experience in 1844, which was ample, and I think successful, as I

did not lose more than two patients, whom I visited the first day; and I attributed most of the deaths which I witnessed to too active purgation with drastic medicine. There is a strong tendency in the epidemic to localize itself on the bowels. Strong purgatives seemed greatly to increase this tendency. Such cases I always found very intractable. I doubt the efficacy of the mildest purgatives in yellow fever, and am strongly inclined to believe we would be more successful without them. I have seldom used the lancet in yellow fever—not in any case last year—though in 1844 I bled two or three patients with manifest benefit.

I have a good deal of faith in quinine in the incipient stage, and prefer giving it freely during the first 24 hours. I have little faith in mercury. I give it in small quantity in the commencement of the attack—usually a few grains of blue-mass; I do not, however, rely much upon it. I order a warm bath; general if convenient, if not, a hot mustard bath to the feet—followed by flying sinapisms, often repeated. Cups dry or wet *pro re nata* to the nucha, temples, epigastrium and spine—wherever in fact there is much local pain. I generally give a mild aperient in the beginning, assisted by an enema, if the bowels are costive. I am not, however, satisfied, as I before remarked, that this purgative plan, however mild the means, avails anything in most cases of yellow fever. It is hard, however, to overcome the prejudices of people in its favor. I usually find the bowels easily moved. If the skin is dry, I give some diaphoretic, as liquor ammoniæ acetatis with spt. nitre, nitrate potass, and a little sulphate of magnesia in mint water as a menstruum, and if the stomach is not irritable and pulse rather full, add a little antimony or ipecacuanha, to reduce its action and determine to the surface. I have the stimulating pediluvium often repeated and also the sinapisms and stimulating frictions, and if there is much heat about the head, ice or cold water constantly applied till the action of the heart is reduced. If there is tenderness of the epigastrium or abdomen, after cupping I apply a large warm poultice, which I think generally far preferable to blistering. I prefer warm drinks, generally, but there are some cases in which cold drinks are perhaps preferable, and I allow patients frequently to swallow ice in small quantities, if the thirst is urgent, and especially if there is much irritability of stomach. My main reliance is in a good active intelligent nurse—full doses of quinine till the system is brought well under its influence—the frequent and diligent use of external stimulants and cupping according to circumstances. When a remission takes place, if the patient takes it with a relish, I generally give brandy *ad libitum*, till some strength returns. I believe brandy is the best stimulant we can give and most agreeable to patients generally. But I think I have seldom found benefit from its use unless the patient took it cheerfully—and on the other hand, when he took it with a relish I have almost universally found it serviceable.

I have some confidence in small doses of saline medicines, and frequently give them more as an alterative than to act on the bowels. The blood is undoubtedly in an altered state in yellow fever. The saline principles are said to be in defective quantity. I think it extremely probable that in this and other fevers where that condition of the blood exists, the neutral salts are of much more value than is generally supposed among us. It is certain that they are much more extensively

used abroad than among ourselves. The pathology of yellow fever, (perhaps of all fevers,) is, I think, involved in a great deal of obscurity. The gastro-enteritic theory is to me an absurdity. It is evidently mistaking an occasional effect for a general cause. I do not believe that either gastritis or enteritis generally exists in yellow fever; and if any case can exist without either, it is unphilosophic to regard them as the essential cause. Whether the change in the blood, before referred to, is antecedent to the commencement of fever, I am unable to say. Dr. Stephens, I believe, contends that it is. If this be true, (and I think it might be very satisfactorily tested in your city,) it will throw a great deal of light on the pathology of fevers. I have been fully satisfied ever since I had the disease myself, that the first sensible lesion was in the brain and nervous system; and it is probable that the lesion of the ganglionic nerves is owing to that softening of the mucous membrane of the stomach which has been so generally, and as I think, erroneously regarded as the sign of inflammation. The black vomit, I am satisfied, is not an effect of inflammation of the stomach, but is the dissolved blood which has fermented the softened tissues of the stomach and been blackened by the chemical action of the acid there encountered.

The cause of yellow fever, then, whatever it be, must act in one of two ways—either when absorbed into the system it changes chemically the qualities of the blood, and thus contaminates all the different organs, the most sensitive, to wit, the brain and nervous system, suffering first; or it acts directly on the brain and nerves in the first instance, and from this primary lesion results the derangement which follows in the other organs. But I must bring this long letter to a close, which has been written in moments snatched from other engagements, and often interrupted, so that I fear you will find it very desultory and unsatisfactory. If you find any thing in it which shall aid you in the laudable task you have imposed upon yourself, or if at any time I can furnish you with facts or information that may assist you in your literary pursuits, it will be a source of much gratification to give you all the aid in my power.

Yours, very respectfully,

WILLIAM McCRAVEN.

DR. E. D. FENNER.

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